

INTEGRATED AREA DEVELOPMENT PLAN
OF
TALBEHAT BLOCK

SUBMITTED TO
THE UTTAR PRADESH DEVELOPMENT SYSTEMS CORPORATION LTD.

BY
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CHAPTER 1

Introduction

1. The Background

The first two decades of planned development in India witnessed the post-world war reconstruction and rehabilitation works, creation of basic infrastructure and increase in production and supply of essential commodities, particularly the foodgrains. The development plans till then were growth oriented. Although, attention of the government was drawn from time to time to the problem of growing inter-regional disparities, nothing could be done in this direction till the Third Plan and practically upto the Fourth Five Year Plan. In the mean time the notion that in a situation like India growth would by itself lead to a re-distribution in favour of the poor, appeared to be loosing grounds. And, by the end of the Fourth Plan the country became almost self-sufficient in food production, so that the priority of growth could be deferred in favour of the pressing need for re-distribution.

With the beginning of the Fifth Plan, special emphasis came to be laid on reducing the inter-personal and inter-area disparities. Towards this end various programmes were introduced. They are, for instance, the programmes for development of drought prone areas, small farmers, hill areas and tribal areas, along with the National Minimum Needs Programme. But the problems of un/underemployment and poverty are not confined only to the backward or special problem areas but are widely spread in agriculture

dominated rural areas. The need for regional, sub-regional or lower level planning was therefore evident.

Block level planning came to be introduced in the country as a stage of planning down below the state level. The importance of lower level planning was recognised during the Third Five Year Plan itself, with a view to narrowing down inter-regional and inter-district disparities. At the same time the need for working out plans for all the districts was felt towards encouraging the predominant and conducive activities in particular context of the area, avoiding wastages in terms of investments for non-conducive activities and thereby making optimal use of physical and financial resources on the one hand and providing income opportunities to the poor on the other. Thus, at the instance of the Planning Commission, district level planning was introduced during the Fourth Plan Period. The initial exercise of district plan formulation in the state served only a training to the officials posted at the district planning units. The preparation of district plans practically started only with the strengthening of the planning machinery at districts in the beginning of the Fifth Plan.

The necessity of planning for smaller entities was also felt towards ensuring more efficient use of physical, financial and manpower resources. In fact the terrain conditions, land use, cropping pattern, demographic structure, and other such structural characteristics vary considerably among areas or development blocks within the districts. According to the guidelines issued by the Planning Commission to the State Governments, block level planning should have been started at the

operational scale from the Fifth Five Year Plan. But it was perhaps too early to have set the process for financial and administrative reasons. The formulation of block level plans was thus initiated with the beginning of the Sixth Five Year Plan.

The Sixth Five Year Plan endeavoured to make a perceptible dent on the country's problem of poverty and unemployment, where micro-level or block level planning came to be regarded as the principal instrument under the programme of Integrated Rural Development. This approach of development is based on the assumption that by and large poverty and un/underemployment go together and take strength from one another. The principal objective to be embodied in the block level plans is to mitigate as far possible the problem of rural un/underemployment, apart from those of growth and diversification of economic activities and improvement in the quality of life of the masses. Further since the operational plans at the block level could not be worked out with available expertise and strength of personnel in the existing planning machinery, it was decided to involve autonomous research institutions and voluntary organisation for carrying out the task.

2. The Plan for Talbehat Block

2.1 Scope

The present integrated development plan for Talbehat block of district Lalitpur has been prepared in the aforesaid background, with a view to ensuring more efficient use of the local physical and man power resources. The main thrust however lies on increasing, as far as possible, the employment opportunities for the rural population on the one hand and ensuring greater equality on the

other. The basic promise of creating employment opportunities, implicit in this approach, is that the un/underemployed labour force in an area, defined in terms of a cluster of villages, can only, be gainfully employed within that geographical boundary. In other words, since there is no mechanism of coordination in formulation of plans on inter-area basis, it is difficult to study and visualise the creation of employment opportunities in adjoining or nearby areas, though the possibility of which can not be ruled out. In this sense, the scope of block level plans is limited. Yet it has to go a long way towards fostering development in rural areas.

2.2 Objectives

The integrated area development plan of Talbehat block aims at :

- i. studying the endowment conditions and resource potentials of the area and outlining the structural and infrastructural constraints to development,
- ii. depicting the levels of development or underdevelopment of the block vis-a-vis the district Lalitpur as a whole,
- iii. reviewing the performances of the ongoing development programmes,
- iv. working out the strategy for and a long-term perspective of development of the area,
- v. identifying central places and functional gaps, which could be filled in to facilitate and enthuse development of the area, and
- vi. envisaging development proposals in terms of sectoral programmes and activities towards creation of employment and income opportunities for the masses.

2.3 Methodology

The exercise is based on the analysis of data, most of which were taken from the district and block level officials, observations

made by the officials of the development departments in the meetings held with them, field observations and discussions with non-officials down below to the cultivators and other segments of the rural population.

In the first stage of carrying out the exercise, a detailed study has been made of the availability of resource potential. Second, the levels of development and physical progress of various programmes have been analysed with a view to having an idea of the conducive and non-conducive areas of and constraints to development, given the present system of administration. Third, the perspective and strategy for long-term development of the area were worked out on the basis of the above analysis. Fourth, the central places have been identified on the basis of the functional hierarchy of the settlements for making proposals for creation of missing functions/facilities that are essential for the envisaged process of development. Fifth and the last, taking into account the availability of resources, and needs and aspirations of the people ^{and} /priorities of development of the area, the development programmes for different sectors have been worked out. Attempt has also been made, as far as possible to indicate the prospects of generation of employment opportunities due to the proposed programmes.

2.4 Organisation

The document consists of eight chapters. The Chapter 1 gives a general background of emergence of block level planning as a tool of development, and the scope, objectives and methodology followed in the formulation of the indicative plan of block Talbehat

(Lalitpur). Chapter 2 brings out the existing status of the area in terms of physical conditions and indicators depicting the state of socio-economic development. It also examines the performances of the ongoing programmes towards assessing the scope for various developmental activities and identifying factors constraining the process of development of the area in desired directions. The long term perspective and the strategy of development are envisaged in Chapter 3. Chapter 4 deals with identification of central places in the block, and Chapter 5 provides a description of the proposed sectoral programmes. Certain important points have also been brought out for consideration of the implementation agency towards improving the performance (Chapter 6). The financial implications of the plan are presented in Chapter 7. Lastly, Chapter 8 reviews the suitability or otherwise of the existing organisational set up at the block level.

CHAPTER 2

The Block Profile

1. Location

Talebhat is one of the existing six development block of district Lalitpur and was created on June 1, 1956. The area derives its name from 'tal' (lake) and 'behat' meaning 'bihat', i.e. village, in the language of Gonds who had been the original rulers there. Situated in the region of latitude $25^{\circ} 3' N$ and longitude $78^{\circ} 26' E$, towards the south-west extreme of Uttar Pradesh, the block area stretches along the National Highway No.26. The block headquarter is at a distance of 50 kms. south of Jhansi and 42 kms. north of Lalitpur towns. The northern extreme of the block area is formed by the confluence of the rivers Betwa and Shahjad, a tributary of Betwa. On the north-west the river Betwa separates the area from district Jhansi and further south-ward from Madhya Pradesh, and the eastern boundary is carved out by river Shahjad, separating it from Madhya Pradesh. The southern boundary is contiguous with Jakhora and Bar blocks of district Lalitpur.

The block headquarter is located on the Talbehat-Matatila road at about 1.5 km from the Talbehat, the only town in the district, other than Lalitpur. The 1971 Census report puts Talbehat in the functional category of 'Services'. Talbehat is also the headquarter of one of the two sub-divisions of district Lalitpur.

2. Physical Conditions

The geographical area of the block is reported at 726 sq. kms., which is about 14 per cent of that of the district. Being on the south-west plateau land, the area exhibits eroded stretch of the Vindyan range, numerous shrubs and rocks, uneven surface and reddish soil, namely the, Bundelkhand Type 1 - locally called 'Rankar'. This type of soil is commonly identified in two groups, namely Type 1A that is found along the rocky ridges in the southernmost part of Lalitpur and Type 1B - a coarsegrained reddish soil found in the northern part. The soil found in Talbehat is almost uniform and is the Bundelkhan Type 1B. The lime content of the soil is hardly 2 per cent and the sand content is over 70 per cent. The land fertility is poor. Although this type of soil generally produces inferior grains like juar and bajra in the kharif season, the Talbehat block area is also suited for paddy cultivation. The staple food of the area is however, wheat and gram according to the 1971 Census. Of late, ginger cultivation has also been started in the area. In irrigated areas vegetables are also grown. Besides, in the vicinity of irrigation wells, small groves of lemon are maintained by some of the cultivators. The climate is suitable for citrus fruits like musammi and lemon provided irrigation is available.

The general slope of the land is from south to north. The only river passing through the area, in its south-eastern part, is Shahjad which is a tributary of the river Betwa. Water logging is no problem there. According to the lead bank report, there are around 200 ponds in the block. Some of these ponds can be renovated

for irrigation, which is very much required there, and certain others can be used for development of fisheries.

Summer starts in the area relatively early as compared to the alluvial region of the state. The maximum normal temperature being available for Lalitpur only, is reported at 47.8°C and minimum at 3.1°C . The region is classified as semi-arid; the average annual rainfall is reported around 918 mm for the district. Based on a seventeen year average ending 1957, the average annual rainfall for Talbehat works out at 837.5 mm., as reported in the Gazetteer of district Jhansi. This figure is a little lower than the corresponding one (918.6 mm) reported for Lalitpur. As to the distribution of rainfall in the block over different months, an average for February is 11.7 mm. The figures (mm) for June, July, August, September and October are 61.5, 301.7, 270.8, 130.6 and 16.0, and for remaining months it is less than 10 each. Upto the year 1957 the lowest annual rainfall was recorded at only 46 per cent of the normal and the highest at 153 per cent of that.

The availability of minerals so far identified in the area is limited to stones. Of the various types of stone, the one having commercial use and available there is granite, which is used mainly for making grits as material for road and other construction works.

The forests occur almost throughout the block and represent more than 14 per cent of the reported area. This figure for the district a whole is 13. But the forests are not playing any significant role for development of the economy except for providing

employment to some local labourers, meeting demand of fuelwood and timber for the local people and supplying tendu leaves for 'biri' manufacturing mainly outside the block area. Bamboo is also available there and are scarcely used in the villages for producing baskets and other such products.

3. Demographic Profile

The total population of Talbehat block recorded in 1971 Census was 70417, which is 16 per cent of that for the district Lalitpur. The percentage of urban (town area) part of the block in 1971 was only 10.07, which is very close to the district percentage of 9.6. The number of females per 1000 males for the blocks in 1971 comes to 837 as against 858 for district Lalitpur. The percentages of literates and scheduled caste/tribe population in the block as per 1971 Census work out to 16 and 21 respectively and are of the same order as for the district (Table - 1). There

Table - 1 : Population Characteristics (1971)

Sl. No.	Description	Talbehat Block	Lalitpur District
1.	Population		
	Total	70417	436920
	Rural	62899	394940
	Urban	7518	41980
2.	Density of population per sq. km.	96.5	85.2
3.	Percentage of urban population (1971)	10.7	9.6
4.	Number of females per 1000 males	837	858
5.	Percentage of literates	16	17
6.	Percentage of scheduled caste and scheduled tribe population	20.9	22.1

Source : Population Census 1971 Report.

were no scheduled tribes in the block area. The current population of the block is estimated at 85052 as against 70417 in the year 1971.

The percentage of population engaged in economic activity, as per 1971 Census, works out to 34.7 for the block, which is slightly higher than the figure of 33.0 for the district. There is also some difference in the employment structure from the block area to the district as a whole. The percentages of workers of Talbehat block engaged in primary activities worked out to 79.2 (district 83.1), secondary sector 4.0 (district 4.9) and the tertiary sector 16.8 (district 12.0) as shown in the Table - 2. This indicates that the growth rate of service sector has been relatively higher in Talbehat, particularly in the urban area, as compared to the district. The percentages of workers engaged in tertiary sector in 1971 comes to 7.2 and 84.6 respectively for rural and urban areas of the block as against the corresponding figures of 5.9 and 66.5 in the district.

Table - 2 : Occupational Structure (1971)

Description	Talbehat Block	Lalitpur District
1. Total population (No.)	70417	436920
2. Workers (No.)	24457	144112
% to population	34.7	33.0
3. Percentage distribution of workers		
a) Primary Sector	79.2	83.1
i. Cultivators	65.4	68.6
ii. Agricultural labourers	13.2	13.6
iii. Animal husbandry and forestry	0.4	0.5
iv. Mining	0.2	0.4
b) Secondary Sector	4.0	4.9
i. Household industries	3.2	3.1
ii. Other than household industries	0.6	1.2
iii. Construction	0.2	0.6
c) Tertiary Sector	16.8	12.0
i. Trade and commerce	2.3	3.1
ii. Transport, storage and communication	1.2	0.9
iii. Other services	13.3	8.0

Source : Population Census 1971 Report.

Agriculture being the major occupation, absorbed 78.6 per cent of the workers in the block (district 82.2). The proportion of agricultural labourers in the total number of agricultural workers in the region was only about 17 per cent, which is considerably lower than the State's average of about 26 per cent for the year 1971. This suggests that the availability of land for cultivation is not so difficult in the area as in certain other parts of the State, but the main problem lies in ensuring fuller and more productive use of the land for cultivation, which is the means of livelihood for about two-thirds of the rural population.

4. Socio-Economic Status

4.1 Land Use Pattern

Cultivation being the mainstay of the rural population in the area, the socio-economic conditions of the people are determined by the availability of land for cultivation, size and distribution of land holdings and the level of agricultural technology in vogue. Table -- 3 shows the land use pattern of the block, compared with that of the district Lalitpur, as reported for the year 1977-78. Accordingly of the total reporting area of 72812 hectares of Talbehat block, the forests share 14.36 per cent (district 13.16%), barren and unculturable land 9.62 per cent (district 4.32%); fallow lands 7.61 per cent (district 11.21%), land put to non-agricultural uses 11.14 per cent (district 4.88), under pastures and 'miscellaneous trees and groves' only 0.70 per cent (district 1.98%) and culturable wastes as high as 35.60 per cent (district 31.33%). In spite of the fact that the proportion of fallow lands in the total area is relatively small in

Table - 3 : Land Use Pattern (1977-78)

(Hectares)

Description	Talbehat Block	Lalitpur District
1. Reporting area	72812 (100.00)	511143 (100.00)
2. Forests	10452 (14.36)	67279 (13.16)
3. Culturable waste	25920 (35.60)	160115 (31.33)
4. Fallow lands	5541 (7.61)	57285 (11.21)
5. Barren and unculturable land	7011 (9.62)	22116 (4.32)
6. Land put to non-agricultural uses	8110 (11.14)	24923 (4.88)
7. Pastures	420 (0.58)	7118 (1.39)
8. Area under other trees and groves not included in net area sown	86 (0.12)	3010 (0.59)
9. Net area sown	15272 (20.97)	169297 (33.12)
10. Area sown more than once	9029	42784
11. Gross cropped area	24301	212081
12. Net irrigated area	9266	45685
13. Gross irrigated area	10005	47311

Note : Figures in brackets show percentages to reporting area.

Source : District Statistical Bulletin, Lalitpur, 1979.

the block, the proportion of net area sown (Talbehat 20.97%, Lalitpur 33.12%) is also low. This is mainly because a considerable stock of land is either unculturable or undeveloped for cultivation for want of investment beyond the capacity of the farmers. With this availability of land, for cultivation, the net area sown per capita of the current rural population (estimate) comes to about 0.21 hectare. Although this average size does not appear to be very

small, but it is inadequately remunerative because of low productivity of land in the area.

4.2 Size of Landholdings

The total number of landholdings in the block was reported to be 17633, of which about one-third were below 1 hectare in size, and about 39 per cent fall in the size group of 3 hectares and above (Table - 4). The table shows that the proportion of small holdings is higher in the block as compared to the district as a whole. At the same time the average size of holdings, either in the size group of 'below 1 ha.' or '1-3 ha.' appears to be slightly higher in the block. While the holdings below 1 ha. cover about 12 per cent of the total landholding area in the block (district 9.72%), the size ranges of '1-3 ha.' and '3 ha. and more' share 21 per cent (district 19%) and 68 per cent (district 72%) of the total area.

Table - 4 : Distribution of Operational Holdings by Size Groups

Description	Size Group (Hectares)			Total/All Groups
	Below 1	1 - 3	3 and above	
TALBEHAT				
Number	5922	4844	6867	17633
% of total	33.58	27.47	38.95	100.00
Area (ha.)	5412	9692	30289	45393
% to total	11.92	21.35	67.73	100.00
Average size (ha.)	0.91	2.00	4.41	2.57
LALITPUR				
Number	27242	27587	36943	91772
% to total	29.68	30.06	40.26	100.0
Area (ha.)	23591	45059	174090	242740
% to total	9.72	18.56	71.72	100.00
Average Size (ha.)	0.87	1.63	4.71	2.65

Source : District Credit Plan of Lalitpur for the period 1978-80, Punjab National Bank, Development Studies Cell, PS & LB Divn., H.O. New Delhi (undated), p.vii.

The figures reported in the District Statistical Bulletin are slightly different and at the same time they refer only to the area under different size groups of holdings and not their numbers in the block. They are reported in Table - 5 for the reference year 1977, which appears to be more recent as compared to reference year of the data reported in Table - 4 wherein the total number of holdings in the district has been recorded as 91772, against the 1977 figure of 104524. The Table - 5 shows that in terms of area coverage, the land holdings below 1 ha. represent 9.9 per cent (district 9.5%), 1-3 ha., 34.3 per cent (district 29.8%), and above 5 ha. 55.8 per cent (district 60.7%). This also suggests that the representation of small holdings is slightly higher in Talbehat block as compared to the district as a whole. Taking the rural workforce composition for the block as per 1971 Census, the estimated current rural population of 74134 and the net area sown to be 15272 hectares, the land-man ratio for the block works out to 0.76 hectare per agricultural worker.

It is evident from the above that the pressure of population of land, in terms of land-man ratio is not high. But the profile of agriculture is low, and so is the return per unit of land under cultivation. Typical soil conditions, topography and lack of irrigation facilities are the main factors responsible for this state of affairs. The agricultural development is severely constrained, as would be evident from the following descriptions about cropping pattern, irrigation, use of chemical fertilizers and coverage of high yielding varieties.

Table - 5 : Area Under Landholdings in Different Size Groups (1977)

Size Group (Ha.)	Area (Hectares)		
	Talbehat Block	Lalitpur District	
		Total Area	Average Size
1. Below 0.5	1085 (3.3)	5132 (1.7)	0.79
2. 0.5 - 1.0	2175 (6.6)	23899 (7.8)	1.53
3. 1.0 - 2.0	5466 (16.7)	45079 (14.7)	1.68
4. 2.0 - 3.0	5740 (17.6)	46259 (15.1)	2.74
5. 3.0 - 4.0	4641 (14.2)	34401 (11.3)	3.46
6. 4.0 - 5.0	3914 (12.0)	27034 (8.8)	4.98
7. 5.0 - 10.0	5241 (16.0)	63811 (20.9)	7.05
8. 10.0 - 20.0	3199 (9.8)	44968 (14.7)	16.46
9. 20.0 - 30.0	548 (1.7)	9439 (3.1)	28.09
10. 30.0 - 40.0	299 (0.9)	2196 (0.7)	34.31
11. 40.0 - 50.0	43 (0.1)	899 (0.3)	44.95
12. 50.0 and above	367 (1.1)	2610 (0.9)	153.53
Total	32718 (100.0)	305727 (100.0)	2.92

Note : Figures in brackets denote percentages to corresponding totals.

Source : Office of Statistics Officer, Lalitpur.

4.3 Cropping Pattern

The total cropped area under important crops in Talbehat block for the year 1977-78 was reported at 21066 hectares of which 95.67 per cent represented the area under food crops (Table - 6). The major crops in Kharif season are maize, paddy and urd and account for over 83 per cent on the Kharif cropped area. About 9.3 per cent of the Kharif cropped area was reported under small millets. In the rabi season wheat, barley and gram are the main crops which taken together represent 94 per cent of the Rabi cropped area. Taking Kharif and Rabi seasons together, the most dominating crop, in terms of area coverage, comes out to be wheat, followed by maize, paddy, urd, barley and gram. The area under commercial crops, mainly til, was only 4.33 per cent of the area under all the crops.

The cropping pattern of the block is somewhat different from that of the district as a whole. Whereas the shares of paddy, maize, urd and barley are relatively high in the block, the proportion of area under commercial crops is relatively low as compared with the district. This indicates that not only the incomes of the farmers are low because of the domination of low value crops on their farms but also that low incomes of the farmers, coupled with lack of infrastructural facilities, refrains them from switching over to high value crops. Obviously the worst sufferers are the small farmers who have very limited capacity to invest on land.

Table - 6 : Cropping Pattern(1977-78)

Description	Talbehat		Lalitpur	
	Area (ha.)	% of Area*	Area (ha.)	% of Area*
I. <u>Food Crops</u>	20153	95.67	183739	90.80
<u>Kharif</u>	10652	50.57 (100.00)	94137	46.52 (100.00)
1. Paddy	3314	15.73 (31.1)	13437	6.64 (14.3)
2. Maize	3746	17.78 (35.2)	13317	6.58 (14.1)
3. Jowar	334	1.59 (3.1)	45963	22.71 (48.8)
4. Urd	1819	8.64 (17.1)	9562	4.73 (10.2)
5. Moong	449	2.13 (4.2)	680	0.34 (0.7)
6. Small Millets	990	4.70 (9.3)	11178	5.52 (11.9)
<u>Rabi</u>	9501	45.10 (100.0)	89602	44.28 (100.0)
1. Wheat	6540	31.05 (68.8)	65935	32.58 (73.6)
2. Barley	1540	7.31 (16.2)	4247	2.10 (4.7)
3. Gram	846	4.01 (9.0)	15874	7.85 (17.7)
4. Pea	40	0.19 (0.4)	128	0.06 (0.2)
5. Masur	535	2.54 (5.6)	3223	1.59 (3.6)
6. Arhar	-	-	195	0.10 (0.2)

Table - 6 (contd.)

Description	Talbehat		Lalitpur	
	Area (ha.)	% of Area*	Area (ha.)	% of Area*
II. <u>Commercial Crops</u>	913	4.33	18618	9.20
1. Linseed	3	0.01	11714	5.79
2. Til	801	3.80	4652	2.30
3. Sugarcane	36	0.17	823	0.41
4. Rapeseed and Mustard	-	-	1006	0.50
5. Groundnut	25	0.12	112	0.05
6. Tobacco	2	0.01	2	-
7. Sann-Hemp	20	0.10	127	0.06
8. Potato	26	0.12	182	0.09
III. Total Cereals	16464	78.16	154077	76.14
IV. Total Pulses (including gram)	3689	17.51	29662	14.66
V. Total (All Crops)	21066	100.00	202357	100.00

*The figures in brackets are percentages of the corresponding kharif and rabi totals. The remaining percentages are from the total of all crops.

Source : District Statistical Bulletin, Lalitpur, 1979.

4.4 Irrigation

The main source of irrigation in the block as well as in the district as a whole is well. The most commonly used device for lifting water from the well is pursian wheel. The numbers of masonry wells and pursian wheels reported in the block during the year 1977-78 are 5345 and 5270 (Table - 7). The corresponding district figures are 22774 and 20102. The share of masonry wells in the net irrigated area of the block in the reference year is reported at 10204 hectare or over 97 per cent. The area covered by other sources of irrigation, namely tanks and canal, in the

Table - 7 : Sources of Irrigation And Net Irrigated Area
(1977-78)

Source	Talbehat Block		Lalitpur District	
	Availa- bility	Area Irri- gated (ha.)	Availa- bility	Area Irri- gated (ha)
1. Canal (Km.)	NA	86 (0.82)	520	24218 (44.02)
2. State Tube-wells (No.)	-	-	-	-
3. Private Tube-wells (No.)	-	-	-	-
4. Pumping Sets (No.)	381	NA	2404	-
5. Masonry Wells (No.)	5345	10204 (97.15)	22774	28383 (51.58)
6. Pursion Wheels (No.)	5270	NA	20102	NA
7. Tanks (No.)	NA	213 (2.03)	43	1656 (3.01)
8. Bundhis	NA	-	40	763 (1.39)
Total	-	10503	-	55020

Note : Figures in brackets denote percentages to the corresponding totals.

Source : District Statistical Bulletin, Lalitpur, 1979.

block is quite small, adding to 299 hectares or 2.85 per cent of net irrigated area. In the district as a whole, however, canal irrigates over 24000 hectares, which is 44.02 per cent of the net irrigated area in 1977-78. Thus, while masonry wells are the predominant source of irrigation in both Talbehat and Lalitpur, they are by and large the only source of irrigation for the block, unlike the district as a whole. It may be mentioned here that construction of wells in the area is relatively difficult because of its rocky terrain. Moreover, during dry months the water level sinks down and in some cases even below the rock layers inside the wells. It becomes then necessary to blast out the rocks for revitalising them.

The generally irrigated crops out of the twenty crops referred to in the Table - 6 presented earlier are wheat barley, gram, pea, sugarcane and potato. The percentages of irrigated area to total area under these crops in the year 1977-78 work out respectively to 98.47, 97.34, 81.91, 67.50, 100.00 and 100.00 respectively, so far as Talbehat block is concerned. The extent of irrigation is relatively high in respect of these crops in the block as compared to the district as a whole (Table - 8). The percentage of irrigated area under the cereal crops in the block works out to 48.22 and that for pulses 32.23. The corresponding figures for the district are only 23.37 and 27.68 respectively. Some important crops, namely paddy, maize, jowar, bajra, urd, moong, arhar and til are grown without irrigation. The gross irrigated area as percentage of gross cropped area for the block in the year 1977-78 comes to 41.17 which is higher than the district average of 22.30 per cent.

Table - 8 : Crop-wise Irrigated Area (1977-78)

Crops/Crops Groups	Percentage of Irrigated to Total Area Under the Crops	
	Talbehat	Lalitpur
1. Paddy, maize, jowar, bajra and small millets	-	-
2. Wheat	98.47	48.86
3. Barley	97.34	89.29
4. TOTAL CEREALS	48.22	23.37
5. Urd and moong	-	-
6. Gram	81.91	38.57
7. Pea	67.50	57.03
8. Arhar	-	-
9. TOTAL PULSES	32.23	27.68
10 Rapeseed/Mustard	-	0.80
11 Linseed*	66.67	2.79
12 Til	-	-
13 Sugarcane	100.00	99.64
14 Tobacco*	100.00	100.00
15 Potato	100.00	100.00
16 ALL CROPS	41.17	22.30

*Areas under these crops are quite small in the block.

Source : District Statistical Bulletin, Lalitpur, 1979.

4.5 Use of Fertilizers

The total distribution of fertilizers, in terms of nutrients in the block during the year 1977-78 was reported to be 152 tonnes - Nitrogenous 88 MT, Phosphatic 44 MT and Potassic 20 MT - as shown in Table - 9. The use of fertilizers per hectare of gross cropped area thus works out to 3.621kg. for N_2O , 1.811 kg. for P_2O_5 and 0.823 kg. for K_2O , adding to 6.525 kg. The corresponding figures for the district Lalitpur are of the same order in case of nitrogenous and potassic fertilizers and relatively higher in case of phosphatic fertilizers, all of which add to 7.431 kg. per hectare of gross cropped area. Thus, the consumption of fertilizers is low in the district and still lower in Talbehat block.

Table - 9 : Distribution of Fertilizers (1977-78)

Description	Talbehat	Lalitpur
1. Distribution of fertilizers in terms of nutrients (MT)		
a) N_2	88	758
b) P_2O_5	44	638
c) K_2O	20	180
Total (a+b+c)	152	1576
2. Gross Cropped Area (Ha.)	24301	213081
3. Distribution of fertilizers per hectare of gross cropped area (kg.)		
a) N_2	3.621	3.574
b) P_2O_5	1.811	3.008
c) K_2O	0.823	0.849
Total (a+b+c)	6.525	7.431

Source : District Statistical Bulletin, Lalitpur, 1979.

4.6 Coverage of High Yielding Varieties

Any coverage of high yielding varieties in the block as well as the whole district was reported to be in respect of paddy and wheat only in the year 1978-79. The HYV paddy and wheat areas were reported at 1007 ha. and 6222 ha. The total coverage of these crops in the block in the year (as reported in Table - 6) are 3314 ha. and 6540 ha. respectively. The proportion of area under high yielding varieties in case of paddy is thus about 30% and in case of wheat 95 per cent. The corresponding percentages for the district work out to 36 and 54. This indicates that the high yielding variety of wheat could be more popular as compared to paddy in the district and more so in the block. There is need of introduction and propagation of high yielding varieties of paddy in the area, particularly in view of the fact that within Lalitpur district, the proportion of paddy area to the gross cropped area is highest at about 14% in Talbehat as against 6.6% for the district.

4.7 Cooperative Societies

During the year 1978-79, the total number of primary agricultural credit societies in the block was 9, with the total membership of 5264, share capital of Rs.5.01 lakhs and deposit of about Rs.47 thousand. The total amount of loan distributed during the year by these societies in the block stood at Rs.22.22 lakhs, of which short term loan amounted to Rs.21.36 lakhs and medium term at Rs.0.86 lakhs. All the villages of the block are covered by these societies. The above figures show that on an average an individual member received a loan of Rs.422 during the year 1978-79 so that the loan to share capital ratio stood at 4.44. In Lalitpur district

as a whole, the average amount of loan disbursed per member comes to Rs.390 and loan to share capital ratio 4.02. This suggests that the operation of primary agricultural credit societies in Talbehat block is almost the same as in the district as a whole.

Beside the primary agricultural credit societies, there is one Sanyukta Krishi Samiti in the block as against a total number of 28 in the district comprising 6 blocks. The area under the sanyukta krishi samiti in the block in the year 1978-79 was 25 hectares as against a total of 1898 hectares or about 68 hectares per samiti in the district. There are no vidhayan samities in the block or district, and only one marketing society in another block (Mahroni) in the district. All the villages of Talbehat block are beyond 5 kilometers from the marketing society.

4.8 Agricultural Productivity

Agricultural productivity in an area is governed by the cropping pattern and the yield rates. Unfortunately no authentic figures of yield rates are available at the block level. The area and production estimates of various crops, as reported for the year 1977-78 in the statistical bulletin of district Lalitpur (1979), show the yield rates for a number of important crops, namely paddy, maize, jowar, urd, moong, til, sugarcane and potato in Talbehat block being exactly the same as in the district Lalitpur as a whole. The respective yield rates in quintals per hectare are 5.21, 11.09, 5.21, 2.63, 2.48, 1.48, 451.11 and 153.15 (Table - 10). But, at the same time the yield rates in respect of certain other crops comes to be different between the block and the district as a whole.

Table - 10 : Yield Rates of Important Crops (1977-78)
(Quintals/hectares)

Crops	Talbehat	Lalitpur
1. Paddy	5.21	5.21
2. Maize	11.09	11.09
3. Jowar	5.21	5.21
4. Small Millets (Mandua, Sawan, kodon, Kakun and Kutki)	5.97	5.93
5. Wheat	12.04	9.72
6. Barley	10.00	9.76
7. Urd	2.63	2.63
8. Moong	2.48	2.48
9. Masur	3.79	5.29
10. Arhar (not grown in Talbehat)	-	14.10
11. Gram	5.24	4.82
12. Pea	6.83	6.72
13. TOTAL CEREALS	9.75	7.82
14. TOTAL PULSES	3.64	4.18
15. TOTAL FOODGRAINS	8.64	7.24
16. Til	1.48	1.48
17. Sugarcane	451.11	451.11
18. Potato	153.15	153.15

Source : Based on the area and production estimates reported in the District Statistical Bulletin, Lalitpur, 1979.

For the block, the yield rates in quintals per hectare of wheat and barley work out to 12.04 and 10.00 as against the district figures of 9.72 and 9.76. However, on the basis of the estimates given in the aforesaid document, the per hectare yield of food-grains comes to 8.64 quintals for the block (district 7.24 quintals). In case cereals, the yield rate for the block is 9.75 quintals (district 7.82) and that of pulses 3.64 quintals (district 4.18 quintals).

Taking also into account the cropping pattern, it may be observed that there is considerable scope for augmenting value productivity of land in cultivation by effecting greater coverage of commercial crops as also of the high yielding variety of paddy.

4.9 Livestock and Animal Husbandry

The total number of livestock population according to the 1978 Census is reported at a little more than 1.08 lakh in the block against the district figure of 6.35 lakhs (Table - 11). The distribution of the livestock across various categories, excluding poultry, suggests that the percentage of cattles is comparatively lower in the block (60.79) as compared to the district (64.00), and that of buffaloes (13.01) almost the same as in the district (13.11). The proportion of sheep in Talbehat is only 6.37 per cent (district 5.60%) and that of goats 18.45 per cent in the block (district 15.92%). It may be pointed out here that the quality of cattle and buffaloes in the region is generally poor either in terms of milk yield or body weight. The development of cattle and buffalo in the present situation in the block appears to be however possible with the help of breed improvement programme, using non-descript variety of bulls. The climate of the area is not suitable for the exotic bulls generally used for breed improvement.

Table - 11 : Livestock as per 1978 Census

Category	(Number)	
	Talbehat	Lalitpur
1. Cattle	63533 (60.79)	395759 (64.00)
2. Buffalo	13593 (13.01)	81066 (13.11)
3. Sheep	6660 (6.37)	34605 (5.60)
4. Goat	19282 (18.45)	98596 (15.95)
5. Horses and Mules	54 (0.05)	590 (0.09)
6. Pigs	563 (0.54)	2715 (0.44)
7. Other Animals (except poultry)	823 (0.79)	5000 (0.81)
8. Total Livestock (except poultry)	104508 (100.00)	618331 (100.00)
9. Poultry Birds	3705	16988
10. Total (8+9)	108213	635319

Note : The figures in brackets are percentages to the total livestock (except poultry).

Source : District Statistical Bulletin, Lalitpur, 1979.

Among the animal stocks except poultry, goats however constitute a considerable source of income in the rural areas not only because of the relatively high size of their population but because the quality of the goats in the region is far better in terms of weight and milk yield as compared to most part of the State of Uttar Pradesh. The block Talbehat is specially suited for goat development.

Table - 12 shows the distribution of animals and poultry birds by male-female and adult-young stock composition. The number of adult cows in the block are 22596 which per capita of 1971

population works out to 0.32 in the block. This figure for the district comes to 0.31. The number of male cattle in the block is 23565 of which the number of bullocks is 23396. The bullocks are used primarily for agricultural operations. The number of bullocks per hectare of net area sown in the block is thus found to be 1.53 (district 0.90). Talbehat block thus has more of milch cattle per head of population as also more of draft cattle for agricultural operations, in relation to the size of the block, as compared to the district as a whole.

Table - 12 : Livestock Population by Male and Female Adults and Young Stock in Talbehat as Per 1978 Census

Category	A d u l t *			Young Stock	Total Stock
	Male	Female	Total		
1. Cattle	23565	22596	46161	17372	63533
2. Buffalo	276	8264	8540	5053	13593
3. Sheep	-	-	4686	1974	6660
4. Goat	-	-	12124	7158	19282
5. Horses and Mules	-	-	49	5	54
6. Pigs	-	-	-	-	563
7. Other Animals (except poultry)	-	-	-	-	823
8. Poultry Birds	528	1369	1897	1808	3705

*Cattle and buffaloe of 3 years or more, sheep and goats of one year or more, and poultry birds of 6 months or more.

4.10 Fisheries

The development of fisheries has been confined to the state reservoirs in the district. These reservoirs are Matetila, Govind-sagar and Jamni. Matatila is in Talbehat block. The total

water area under fisheries in the block was reported to be 14078 ha. in 1978-79, as against a total of 18718 ha. for the district. It is interesting to note that Talbehat has the greatest potential for fisheries development among all the blocks of the district. During the reference year about 37600 fingerlings were stocked in the block. The total annual production of fish in the block is estimated at 790 quintals.

4.11 Industries

There are 24 registered industrial units in the block out of which one (Baskar Minerals Ltd.) is registered under the Factories Act 1948, and the rest of them are registered with the Directorate of Industries, U.P. The Baskar Minerals Ltd., situated near Talbehat railway station, has a grinder and mixer plant of pyrophyllite and diaspore which are the main ingredients of fire bricks. The fine powder of diaspore is one of the contents of talcum powder. About 40 per cent of the total produce, mainly the fire bricks, of the Baskar Minerals Ltd., is exported outside India. The raw material used by this unit is available within the block area as also in some adjoining area of Madhya Pradesh. There is another similar unit, situated by the Talbehat Matatila road, engaged in carving of soft stone, locally called 'gaura patihar', into items like ashtrays. This unit produces semi-finished goods which are given final touch elsewhere outside the block and are also exported.

The units registered with the Directorate of Industries, U.P., include 7 units of agricultural implements. All these units manufacture purnian wheels, beside manufacturing and repairing other agricultural equipments like ploughs and cutters. Six of these

units use electric power. The other registered industrial units are 4 engineering units (all using power), 4 readymade garment production units catering mainly to the rural population, and one unit each of cement grills, stone powder, box making, note book production, ice candy, printing press, shoe making and saw milling (ara machine), which are concentrated in Talbehat proper. The total employment provided by the aforesaid industrial units is estimated to be in the vicinity of 100 man-years. Apart from the units stated above, there were two industrial cooperative societies of iron craft and oil milling in Talbehat. Both these units are now closed. There is need to enthruse rapid industrial development in the area.

4.12 Availability of Electric Power

The availability of electric power is important for both production and consumption sectors towards betterment of general conditions of living. In the production sector, electricity is useful in agriculture particularly for lifting water. In Talbehat, however, pursion wheels are commonly used for lifting water from the wells. But for industrial growth power is much more necessary. Electrification of villages has on the other hand to go a long way towards improving the quality of life of the people. Unfortunately, only 8 of the 102 inhabited villages in the block are such where electricity is available according to the figure given in the district statistical bulletin of Lalitpur, 1979. The proportion such villages in the block is 7.8 (district 8.0). Save Talbehat proper none of the villages use electric power for productive purposes.

4.13 Communication

There are about 84 kms. of pucca roads in the block, including the roads maintained by the Public Works Department. The density of the roads per 1000 sq. kms. of area in the block works out to 11.57 kms. which is higher than the district average of 10.67 kms. The pucca road length per lakh of population in the block, according to the District Statistics Office is 11.4 kms., which is also higher than the district figure of 10.4 kms. Thus Talbehat block is relatively better stocked with roads. This is also evident from Table - 13, showing the distribution of villages by distance from pucca road in the block and the district. Accordingly about 17 per cent villages in the block have roads as against the proportion of about 15 per cent for the district. The percentages of villages within 1 km., 3 kms., and 5 kms distances from pucca roads in the block are 23.5, 44.1 and 51.0. The corresponding percentages for the

Table - 13 : Distribution of Inhabited Villages by Distances from Pucca Road

Number of Villages	Talbehat	Lalitpur
1. TOTAL (Inhabited)	102	679
2. Connected by Pucca Road	17 (16.7)	100 (14.7)
3. Within the Distance, from Pucca Road, of		
a) 1 km.	24 (23.5)	127 (18.7)
b) 3 km.	45 (44.1)	211 (31.1)
c) 5 km.	52 (51.0)	291 (42.9)
4. At a distance of 5 kms. or more	50 (49.0)	388 (57.1)

Note : The figures in brackets show percentages to the total number of villages.

Source : District Statistical Bulletin, Lalitpur, 1979.

district is 18.7, 13.1 and 42.9 respectively. However, quite a few villages, reportedly 35 in the block are remotely located and are not easily approachable according to the information for the year 1978-79. Thus, although Talbehat block is better off as compared to the district as a whole in terms of the stock of road, there is evident need of extending this infrastructure to unserved villages which are sizeable in number.

Being situated along the National Highway No.26, passenger and goods traffic services are easily available in the block. Talbehat is also an important bus stop from where private buses are available almost every half an hour towards Jhansi in the north and Lalitpur in the south. The number of regular bus stops in the block is 12. The proportions of villages in the block having bus stops within the radius of 1 km., 3 kms., and 5 kms. respectively are 20.6 per cent, 27.5 per cent and 42.2 per cent. The corresponding percentages for the district as a whole are 13.4, 19.1 and 31.2, which are lower as compared to the block averages (Table - 14).

Table - 14 : Distribution of Villages by Distances from Regular Bus Stops (1978-79)

Number of Inhabited Villages	(Number of Villages)	
	Talbehat	Lalitpur
1. TOTAL	102	679
2. Having bus stops	12 (11.8)	71 (10.5)
3. Bus stop within the distance of		
a) 1 km.	21 (20.6)	91 (13.4)
b) 3 kms.	28 (27.5)	130 (19.1)
c) 5 kms.	43 (42.2)	212 (31.2)
4. Bus stop at a distance of 5kms. or more	59 (57.8)	467 (68.8)

Note : Figures in brackets show percentages to the corresponding total number of villages.

Source : District Statistical Bulletin, Lalitpur, 1979.

Apart from road traffic there are four railway stations, on the Jhansi-Bhopal track, catering to the population of the block. Of these, three railway stations are reported to be within the block boundary. The number of villages within 5 kms. distance from a railway station in the block is 8. However, most part of the goods and passenger traffics to, from and within the block area are catered to by the roads.

Another important branch of communication is postal and telegraphic services. The total number of post offices in Talbehat block is 18 of which 17 are located in rural areas. The total number of post offices per 1000 of 1971 population, in rural areas works out to only 0.27 for the block, being lower than 0.31 for the whole district. Obviously, the number of villages having the postal facility is 17 in the block, and the numbers having post offices within the distances of 1 km. 3 kms., and 5 kms. are 24, 41 and 71. Thus more than 30 per cent of the villages in the block are at least 5 kms. away from a post office. The district percentage of such villages is still higher, viz., 48.3 as shown in Table - 15. Telegraphic facilities are however far off from most of the villages in the block as well as the district as a whole.

Table - 15 : Distribution of Inhabited Villages by Dist-
ances from Post Office and Telegraph Office
 (1978-79)

Villages	(Number)	
	Talbehat	Lalitpur
1. Total	102	679
2. Having post offices	17 (16.7)	122 (18.0)
3. Having telegraph offices	1 (1.0)	2 (0.3)
4. Having post office within a radius of		
a) 1 km.	24 (23.5)	141 (20.8)
b) 3 kms.	41 (40.2)	209 (30.8)
c) 5 kms.	71 (69.6)	351 (51.7)
5. Having post office at a distance of 5 kms. or more	31 (30.4)	328 (48.3)
6. Having telegraph office within a radius of		
a) 1 km.	1 (1.0)	4 (0.6)
b) 3 kms	2 (2.0)	12 (1.8)
c) 5 kms.	6 (5.9)	26 (3.8)
7. Having telegraph office at a distance of 5 kms. or more	96 (94.1)	653 (96.2)

Note : Figures in brackets show percentages to the corresponding totals.

Source : District Statistical Bulletin, Lalitpur, 1979.

4.14 Educational Facilities

There are 96 junior basic schools in the block (Table - 16), out of which 94 are in rural areas. Of these 94 schools 17 each are separately for boys and girls and 60 combined for boys and girls both. The number of primary schools per lakh of 1971 population works out to be 133 in the block as against the figure of 128 for Lalitpur district. The numbers of senior basic schools and higher secondary schools in the block are 22 and 2 respectively. There is no degree college, nor any teacher's training centre. Also there is no institution for technical education in the block or district. The Table - 17 shows the distribution of villages by distances from junior basic, senior basic and higher secondary schools for the block and the district as a whole. Accordingly, the proportion of villages within 1 km. or within 3 kms. or within 5 kms. of junior basic schools is higher in the block as compared to the district.

Table - 16 : Educational Institutions (1978-79)
(Number)

Description	Talbehāt			Lalitpur		
	Rural	Urban	Total	Rural	Urban	Total
1. Junior basic schools	94	2	96	533	24	557
2. Senior basic schools	22	-	22	160	8	168
3. Higher secondary schools	1	1	2	7	7	14
4. Degree college	-	-	-	-	1	1
5. Public library	-	-	-	-	1	1

Source : District Statistical Bulletin, Lalitpur, 1979, and block officials.

Table - 17 : Distribution of Villages by Distances from Educational Institutions (1978-79)

(Number of Villages)

Institution	Talbehat				Lalitpur			
	< 1km..	< 3kms.	< 5kms.	≥ 5 kms.	< 1 km.	< 3kms.	< 5kms.	≥ 5kms.
1. Junior Basic School								
1.1 Boys	26 (25.5)	37 (36.3)	49 (48.0)	53 (52.0)	88 (13.0)	165 (24.3)	290 (42.7)	389 (57.3)
1.2 Girls	18 (17.6)	28 (27.5)	44 (43.1)	58 (56.9)	80 (11.8)	123 (18.1)	210 (30.9)	469 (69.1)
1.3 Boys & Girls combined	67 (65.7)	80 (78.4)	91 (89.2)	11 (10.8)	411 (60.5)	477 (70.3)	555 (81.7)	124 (18.3)
2. Senior Basic School								
2.1 Boys	11 (10.8)	25 (24.5)	39 (38.2)	63 (61.8)	71 (10.5)	122 (18.0)	221 (32.5)	458 (67.5)
2.2 Girls	1 (1.0)	15 (14.7)	27 (26.5)	75 (73.5)	21 (3.1)	52 (7.7)	118 (17.4)	561 (82.6)
3. Higher Secondary School								
3.1 Boys	1 (1.0)	3 (2.9)	6 (5.9)	96 (94.1)	9 (1.3)	21 (3.1)	42 (6.2)	637 (93.8)
3.2 Girls	-	2 (2.0)	5 (4.9)	97 (95.1)	3 (0.4)	8 (1.2)	16 (2.4)	663 (97.6)

Note : Figures in brackets show percentages to total number of inhabited villages. The number of inhabited villages in Talbehat block is 102 and that in the district 679.

Source : District Statistical Bulletin, Lalitpur, 1979.

Recent inquiries from the village level workers of all the VLW circles revealed that, taking the schools for boys and girls together, the junior basic schools are situated in 67 out of the total number of 102 inhabited villages of the block. The number of villages having junior basic schools within 3 kms. is 90, and the number of those at distances of 5 kms. or more is 6. The number of villages away at least by 5 kms. from any senior basic school and that from a higher secondary school are 55 and 89 in the block.

4.15 Medical and Health

The medical and health facilities are utterly lacking in rural areas of the block or district. In the year 1978-79 there was a primary health centre near the block headquarters, no allopathic hospital/dispensary in any village of the block and ayurvedic/unani dispensaries in only 3 of the 102 inhabited villages. The number of villages having any kind of hospital/dispensary is reported to be 22 or 3.2 per cent of the total villages in the district in that year. Thus the medical facilities in the block and the district are to the similarly low extent. It may be noted that as much as 83 villages of Talbehat were reported to have no medical facility within a radius of 5 kms. There were only one family welfare centre and 4 mid-wife centres in the block, totalling to 6 and 24 respectively in the district at the rates of 1 and 4 for each of the six blocks of Lalitpur.

4.16 Drinking Water

While tapped water supply is available in urban parts of the district and Talbehat block, the problem exists mainly in the rural areas. There are only 26 villages reported to be covered by the tap water supply in the block as against 127 in the district. The proportion of such villages comes to 25.5 per cent for the block and 18.7 per cent for the district. Wells constitute the major source of drinking water.

In 75 of the 102 inhabited villages of Talbehat the availability of water is reported to be adequate. Water is available insufficiently in 22 villages of the block during summers and in 5 villages throughout the year. The proportion of such villages in the block is 26.5 per cent which is higher than the district figure of 22.4. Moreover 5 villages (4.9%) in Talbehat do not have any source of drinking water in the village. The proportion of such villages in the district is only 1.3 per cent. Creation of drinking water facilities in the block is therefore necessary and should be taken up on priority basis.

5. Review of Ongoing Programmes

In working out development proposals of an area, it is imperative to take a note of the performance of various development programmes and examine their relevance and suitability for and conduciveness to the area. This requires a systematic recording and review of physical progress made under various programmes, alongwith the cost involvements. Unfortunately, the secondary information was found to be no better maintained in the Talbehat

block office than most of the blocks in the State. Given this limitation the present section is based on the available data, discussions with officials and field observations.

The programmes carried out in the block area were by and large confined to agriculture and allied sectors. Emphasis was laid on pursuation and follow up action for augmenting the levels of seed and fertilizer inputs through the so-called kharif and rabi campaigns on the one hand and providing agricultural credit through the co-operatives on the other. Towards development of irrigation infrastructure which is the pre-requisite for increase in agricultural production, construction and revitalisation of wells and installation of pursian wheels were the main activities. The effectiveness of the agricultural development programmes may therefore be judged on the basis of trends in the coverage of irrigation, cropped area, cropping pattern, use of fertilizers and coverage of high yielding varieties as ~~has~~ been taken up here. The performances of the animal husbandry, fisheries and industrial development programmes have been reviewed subsequently.

5.1 Irrigation

The data regarding annual achievements as available from the block office suggests that around 50 or 60 irrigation wells were constructed in the block every year and around 400 pursian wheels installed annually in the area in the recent past, i.e. over a period of five years. During 1977-78 the target for construction of irrigation wells was 75 and the achievement was 61. The number of pursian wheels added in that year was reported at 442, which is much higher than the corresponding target of only 200. Besides

the pursian wheels, an annual target of 40 diesel pumping sets, was fixed for the area for 1975-76 and 50 each for 1976-77 and 1977-78. The achievements against these targets in terms of number of pumping sets have been reported at 10, 30 and 55 respectively. The pumping sets are generally installed in the wells. The construction of bundhies in the block was reported at 854 ha. in 1975-76, 1000 ha. in 1976-77 and 1000 ha. in 1977-78, against the targets of 800 ha., 1000 ha. and 700 ha. respectively. The area irrigated from bundhies in 1975-76 was 58 ha. which declined to 14 ha. in 1976-77. In the year 1977-78, no area under bandhi irrigation was reported. Thus bandhi irrigation scheme does not appear to be suitable for the area. The potential of tanks, which irrigated 139 ha. 384 ha. and 213 ha. during 1975-76, 1976-77 and 1977-78 can on the other hand be raised by cleaning and desilting.

Of vital significance towards increasing irrigation potential of the area are construction and revitalisation of wells, and installation of pursian wheels, apart from cleaning and desilting of tanks. The reported number of masonry wells in 1970-71 was 5214 of which 5135 were fitted with pursian wheels. The corresponding figures for 1978-79 were however almost the same, viz., 5285 and 5154 ^(Block records). Though the number of pumping sets increased from 79 to 302 during the period, the proportion of area irrigated by them remains quite insignificant. Besides, 16 electric and 286 electric tube-wells (private) are reported to have been installed during 1978-79, as per block records. But the area irrigated from private tubewells has been reported as nil in the statistical bulletin of district Lalitpur for the year 1979. Though there appears to be some

discrepancy in the reports, there is an indication that tubewell irrigation is also not feasible scheme for the area in the present day situation. It is evident from the above that revitalisation and construction of wells is necessary for maintaining and augmenting the irrigation potential of the area. It may be pointed out here that because of lack of facility, the targets for well blasting were not fixed for the block. While the numbers of well blastings carried out in the block in the years 1976-77 and 1977-78 were reported at 10 and 36 respectively, the annual potential is assessed at around 300.

As per Table - 18 showing the trends in irrigated area, the net irrigated area in the block was 8000 hectares in 1970-71 which rose to 9266 hectares in 1977-78, showing an increase of about 16 per cent. The gross irrigated area increased by little above 12 per cent during the period. It is however important to note that during 1975-78, the net irrigated area showed no increase, but in fact it slightly declined. The gross irrigated area on the other hand showed an increasing trend over this three year period.

Table - 18 : Net and Gross Irrigated Area in Talbehat during 1970-71, 1975-76, 1976-77 & 1977-78

Description	1970-71	1975-76	1976-77	1977-78
1. Net Irrigated Area (Ha.)	8000	9271	9152	9266
2. Gross Irrigated Area (Ha.)	8902	9595	9730	10005
3. Percentage of Net Irrigated Area to Net Area Sown	51.26	58.95	60.03	60.67
4. Percentage of Gross Irrigated Area to Gross Cropped Area	37.35	40.92	40.84	41.17
5. Intensity of Irrigation (%)	111.28	103.49	106.32	107.98

Source : Block records for 1970-71 and District Statistical Bulletins of Lalitpur for the years 1977, 1978 and 1979.

Intensity of irrigation, which showed slightly upward trend over 1975-78 remained below the already low level of 111.28 per cent obtaining in the year 1970-71.

It has already been indicated earlier that irrigation facilities are required in the block primarily for food crops which represent about 96 per cent of the gross cropped area. The major food crops requiring irrigation are wheat, barley and gram. No marked change was however found in the proportion of irrigated area to total area under either wheat (98 per cent) or barley (97 per cent), over the period 1975-78. The percentage irrigated area under gram on the other hand declined from 88 to 82 during the period. Thus in the recent past, there has been no effective increase in the coverage of irrigation facilities in the block. It may be mentioned here that by and large the block has only the private irrigation sources. There is also the need for construction of canals for substantially augmenting the area under irrigation in the block.

5.2 Cropping Intensity and Cropping Pattern

The Table - 19 shows the trends in net area sown, gross cropped area and cropping intensity. Accordingly the net area sown in 1975-76 was almost the same as in 1970-71. During the period 1970-78, the net area sown declined slightly while gross cropped area remained staggering around the 1970-71 level, as the intensity of cropping continued to grow, though in small measures.

Table - 19 : Trends in Net Area Sown, Gross Cropped Area and Cropping Intensity (1970-78)

Description	1970-71	1975-76	1976-77	1977-78
1. Net Area Sown (Ha.)	15608	15727	15246	15272
% of the year 1970-71	100.00	100.76	97.68	97.85
2. Gross Cropped Area (Ha.)	23832	23450	23824	24301
% of the year 1970-71	100.00	98.39	99.97	101.97
3. Cropping Intensity (%)	152.69	154.83	156.38	159.12

Source : Block records for 1970-71 and District Statistical Bulletins of Lalitpur for the years 1977, 1978 and 1979.

Looking at the shares of important crops in the gross cropped area, we find the percentages of wheat and maize areas have been gradually increasing, while no definite trend could be found in respect of other crops during the period 1970-78 (Table - 20). But during 1975-78 the percentage shares of owar, barley, gram, pea, urd and masur showed declining trends.

Table - 20 : Area Under Important Crops as Percentage of Gross Cropped Area (1970-78)

Name of Crop	(Percentages)			
	1970-71	1975-76	1976-77	1977-78
1. Paddy	12.41	14.42	13.88	13.64
2. Maize	15.02	15.02	15.21	15.42
3. Jowar	1.36	1.68	1.46	1.37
4. Urd	3.78	7.63	7.48	7.49
5. Moong	7.10	1.85	1.94	1.85
6. Wheat	24.63	25.17	26.17	26.91
7. Barley	5.32	7.73	7.16	6.34
8. Gram	2.37	3.78	3.64	3.48
9. Pea	0.45	0.46	0.35	0.16
10. Masur	2.42	2.46	2.21	2.20
11. Commercial Crops	NA	3.94	3.63	3.76
Gross Cropped Area	100.00	100.00	100.00	100.00

Source : Block records for 1970-71 and District Statistical Bulletins of Lalitpur for the years 1977, 1978 and 1979.

The quantities of chemical fertilizers, in terms of nutrients, distributed in the block was 135 M.T. in 1970-71, as against only 101 M.T. in 1975-76, and 152 M.T. during each of years 1976-77 and 1977-78. The consumption of fertilizers per hectare of gross cropped area thus worked out to 5.665 kg. in 1970-71, as compared to 4.307 kg. for 1975-76, 6.380 kg. for 1976-77 and 6.255 for 1977-78. Thus there has been no definite increase in the consumption of fertilizers during the period 1970-78.

5.3 High Yielding Varieties Programme

The HYV crops of the area are mainly wheat and paddy, although some area has been intermittently reported under HYV maize and jowar. The area under HYV paddy in 1970-71 was 820 hectares, which dropped to 506 hectares in 1975-76 and rose to the level of 1007 hectares in 1978-79. The HYV wheat areas in the corresponding years were reported at 1415 hectares, 5645 hectares and 6222 hectares respectively. The area under hybrid maize was 780 hectares in 1970-71, as against only 19 hectares in 1974-75 and 'nil' in the subsequent years. Similarly the HYV jowar area was 75 hectares in 1970-71, and 'nil' from 1974-75 onwards. Thus the HYV programme was successful in the area to a small extent and was confined mainly to wheat crop, followed by paddy. Efforts were also made to augment the coverage of local improved varieties of wheat, paddy, maize and jowar. According to the figures supplied by the block office, almost the entire area under wheat and paddy, other than that under HYV, is now covered by improved varieties.

5.4 Animal Husbandry and Fisheries Programmes

The animal husbandry programmes aimed at breed improvement and disease control and comprised the activities of breeding through natural service and artificial insemination, distribution of improved animals and poultry, fodder demonstrations and distribution of fodder seeds for increasing the production of fodder crops. For a number of reasons, however, none of these programmes appeared to have made any visible impact on the area. First, there is utter lack of facilities and funds for maintenance of service bulls and/or transport and storage of semen at the veterinary centres in the block. For artificial insemination semen is transported from Lalitpur in thermos flask and deteriorates from jerks. There is no fridge for its storage. Second, although some cases of artificial insemination have been reported every year (Table - 21), the participation of the people in these programmes is negligible because they do not generally believe in it the way it has been carried out in the block, and are sceptical about its benefits. Third, castration of scrub bulls, which is considered necessary for breed improvement of the milch animals, could not at all be carried out in the area.

Table - 21 : Physical Progress of Animal Husbandry Programmes

Description	1970-71	1974-75	1978-79
1. Distribution of Improved Animals (No.)	10	3	7
1.1 Cow bull	2	1	2
1.2 Buffalo bull	3	-	-
1.3 Ram	2	2	-
1.4 Buck	2	-	5
1.5 Pig	1	-	-

Table - 21 (contd.)

Description	1970-71	1974-75	1978-79
2. Distribution of Poultry Birds (No.)	1100	535	1300
2.1 Day-old chicks	850	385	885
2.2 Month-old chicks	250	150	120
2.3 Two-months old chicks	-	-	295
2.4 Adult layers	-	-	-
2.5 Broilers	-	-	-
3. Artificial Inseminations Done (No.)	236	413	730
3.1 Cow	129	216	367
3.2 Buffalo	107	197	363
4. Fodder Demonstrations (No.)	6	-	-
4.1 M.P. Chari	1	-	-
4.2 Mac Chari	-	-	-
4.3 Lobia	1	-	-
4.4 P.G. Napier	-	-	-
4.5 Berseem	2	-	-
4.6 Lucern	-	-	-
4.7 Jai	2	-	-

Source : Block records.

As to the poultry development programme, the Table - 21 shows that number of birds distributed in 1970-71 was 1100, which dropped to 535 in 1974-75 and rose to the level of 1300 in 1978-79. It is however learnt that considerable proportion of this stock was distributed to the military personnel living in Talbehat, though this statement may not be taken as authentic in the official quarters. Thus the poultry programme, which was oriented simply at fulfillment of certain targets could hardly be any good for the rural population of the block. Regarding fisheries programme, no efforts have been made to bring small waters under fisheries and organising fishermen cooperatives.

5.5 Development of Industries

In view of the fact that Talbehat block as a whole is poorly endowed for agricultural activity, development of industrial activities has been considered essential for rapid development of the area. Special emphasis has been laid on development of rural and small industries. Fortunately, since Talbehat is a marketing centre, next biggest to Lalitpur district headquarters, and it is situated along a National Highway, there is scope for industrial development in the area. During the early 1970's the block was selected as an industrial growth centre. District Lalitpur, which was a part of the Rural Industries Project (RIP) district Jhansi till March 1974, remained however neglected till then and so was the case of Talbehat block. In the year 1979, the block was brought under the District Industries Centre Scheme, with a view to providing all necessary assistance to the entrepreneur under one roof, along with concessions and incentives. For this purpose the Department of Industries has posted one Assistant Manager of the rank of Industrial Inspector to facilitate industrial development within a radius of 8 kms. of the Talbehat town. The remaining area of Talbehat block naturally comes under the jurisdiction of the DIC Lalitpur. There is however no visible impact of the existing infrastructure in terms emergence of new industrial activities in the area.

Sometimes back a couple of industrial cooperatives, namely of iron craft and oil milling was established in Talbehat, but they have ceased to exist now. The discussion with Gramodyog Adhikari Lalitpur revealed that the Khadi Board also could not enthuse rural industrial development in the block.

6. Constraints to Development

The aforesaid discussions about the existing levels of development and the performances of various programmes indicate that growth and diversification of economic activities in the area have been severely bottlenecked because of the poor resource base, lack of concerted efforts for development and low profile of infrastructural facilities. While the area is not an exception in terms of the predominance of agriculture and allied agricultural activities, the productivity levels in these sectors are very low. The 'rankar' soil which is generally found in the area is characterised by both low fertility and low moisture retention capacity. Moreover, on account of the terrain conditions, preparation of land is difficult and requires relatively high ^{amount of} labour input which the poor farmers can seldom afford. Irrigation facility is also not growing for want of public investment. As such it is difficult for the farmers to make full use of their agricultural holdings. As a result, although there is scope for increasing the cultivated area in the block, the net area sown has kept from increasing over a sufficiently long period of time.

The growth of animal husbandry activities is severely constrained because of the poor quality of cattle and buffaloes. The local cattle and buffaloes are generally about half or even less than that in terms of weight as compared to their Haryana counterparts, so that their capacity of carrying out agricultural operation as well as milk yield is very low. Further, the availability of fodder is scarce in the area. As such it is a common practice among the villagers to leave their cattle astray to feed themselves during dry months. This practice causes extra loss to the existing livestock.

Fortunately, the quality of goats in the area is far superior than that of goats found in most other areas of the State. The local goats are better in terms of both body weight and milk yield. But, for the reason that the development programmes have been more stereotyped rather than based on specific conditions of the area, no special efforts were made for development of goat rearing activity, for which there is no dearth of demand within and outside the block area. In fact, acute poverty and lack of risk bearing capacity amongst the people has kept this activity from growing. It is therefore obligatory on the part of the government to ease the flow of investment funds for the people and share, as far as possible, the risks of investment arising out of unforeseen circumstances, particularly the natural calamities. Similarly, poultry farming can also ^{be} developed in the area provided proper efforts are made in this direction and adequate incentives and safeguards are available to the people.

The infrastructural gaps which have constrained the agricultural and industrial development of the area are mainly in respect of irrigation, power and communication. The expansion of irrigation facilities is necessary towards not only raising the productivity of land but also for bringing more area under cultivation. It has been found that the cultivators who have irrigation wells grow high value crops like vegetables such as ginger, pumpkin, chillies and ratalu (a local root vegetable) for local consumption. There are also small groves or citrus fruit trees in the vicinity of wells. But since the well is the main source of irrigation in the block and its potential is very limited, growth in the area under high

value crops and high yielding varieties and use of fertilizers have been restricted. For the same reason, the farmers are not able to produce enough fodder even for somehow maintaining their cattle and buffaloes in the cattle-yards.

It may be noted here that the number of operating masonry wells in the block reported for the year 1978-79 was almost the same as in 1970-71. This suggests that irrigation potential created by construction of wells is set off by almost an equal number of wells going out of use for want of deepening and revitalisation operations. Thus, the lack of development of irrigation facilities has constrained the growth of both agricultural and animal husbandry activities.

Unfortunately, Talbehat block does not have any state tubewell. In fact, deep boring for ground water irrigation has been rather unsuccessful in the region because of rocky terrain and so it is also a very costly affair. Canals, which appear to be of crucial significance to development of the area cannot, however, be taken out straightway from the rivers since the flow of water in the rivers does not remain sufficiently uniform throughout the year. The canal system so far created in the district is fed from reservoirs of major and medium river dam projects. It was found, as in Mahroni block of district Lalitpur, that canal irrigation has been very successful in raising the productivity of land in the region. The possibility of providing canals in Talbehat area however exists only after the completion of the Shahjad dam.

Yet it is possible to create assured irrigation facilities without much delay through proper utilisation

of surface water by constructing check dams and appropriate bunding, deepening and renovation of wells, tanks and ponds. At present entire rain water in the area finds way to rivulets and nalas and goes a waste. If this wastage of water is arrested, it would go a long way towards augmenting the irrigation potential of the area.

The industrial development in the block has been constrained due to gaps in aggregate demand from within the area and lack of availability of power, apart from ineffectiveness of the schemes of concessions and incentives to the entrepreneurs. In the year 1970-71, none of the villages except Talbehat proper, was electrified. Till the year 1978, according to the report given by the BDO, only 4 out of 102 inhabited villages had the facility of electric connections. In the beginning of 1981, according to the reports given by the VLWs, electricity was available in only 8 villages of the block. It is to add that low voltage, load shedding and power break-downs are very frequent in the area, so that electric power is not catching up as a dependable source of energy for industrial use.

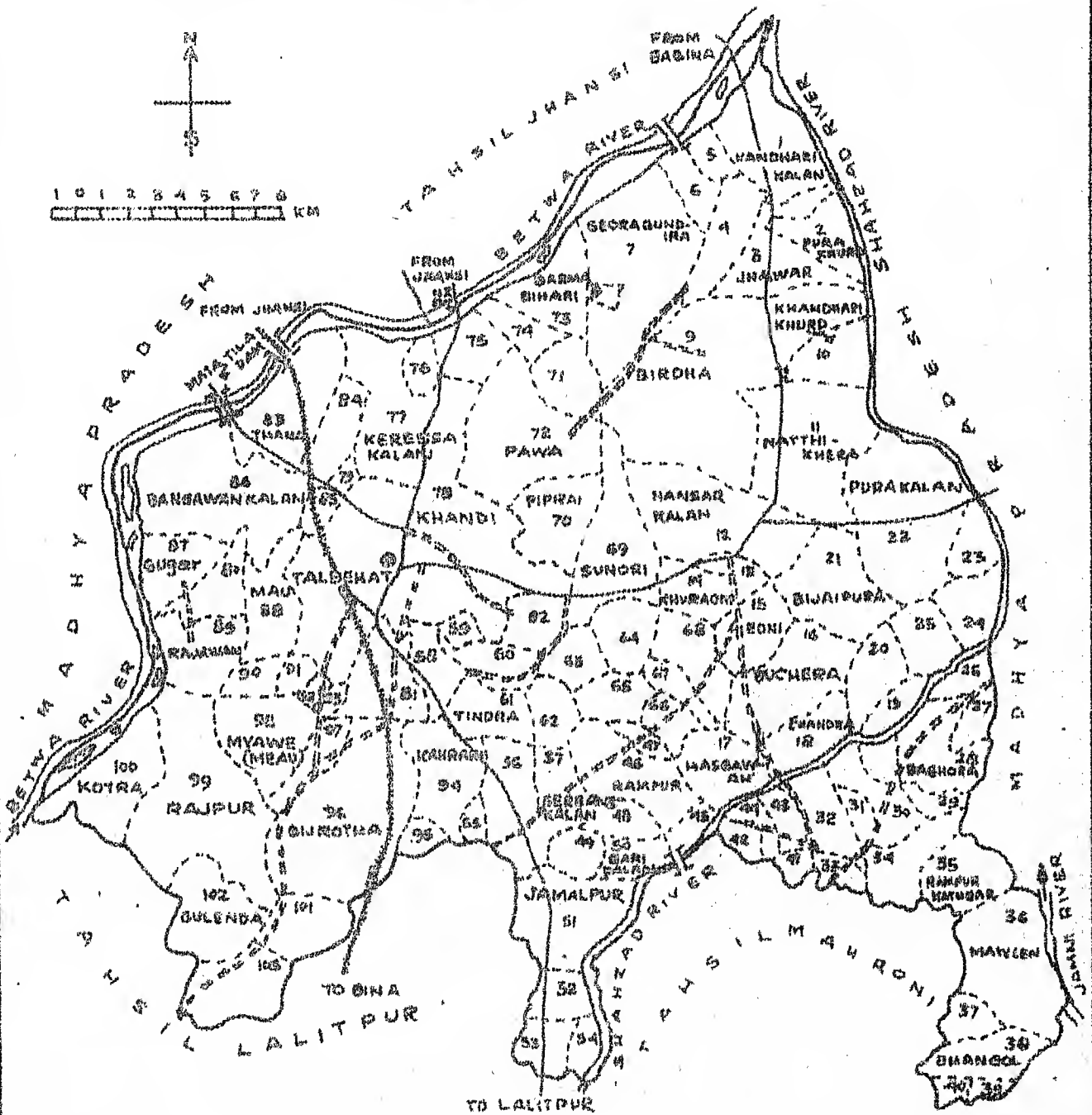
In the communication sector, expansion of road network is very important towards generating impulses for economic development in and around the connected villages. Surprisingly, the number of villages connected by pucca road in the block was reported to be the same, i.e., 17, in the year 1970-71 as in the year 1978-79 as shown in the records. Thus the lack of any conscious efforts towards development of road infrastructure by itself constrained the socio-economic development of the area.










The map showing 'Physical Conditions' of the Talbehat block is placed at page 51 a.

TALBEHAT BLOCK- LALITPUR U.P.

PHYSICAL CONDITIONS

Map 1



BLOCK HEAD QUARTER 
 BLOCK BOUNDARY 
 RAILWAY LINE WITH STATION. 
 NATIONAL HIGHWAY 
 PUCCA ROAD 
 KACHHA ROAD 
 RIVER & STREAM 
 DAM 
 VILLAGE BOUNDARY WITH
 CODE NO 

CHAPTER 3

The Long-Term Employment Perspective And Strategy of Development

Planned development is destined for achieving certain goals, implying economic growth and redistribution, for which a long-term vision is necessary. In fact any marked change in socio-economic conditions of the people can possibly be visualised only through a long period, say of 10-15 years. But, at the same time, the operational plans have to be for smaller periods, with a view to taking care of the current and immediate problems on the one hand and monitoring the path of development on the other. Thus, towards ensuring continuity in the process of development, we first define long-term development goals by taking into account the potentials and development constraints of the area. In pursuance of the so defined goals we work out the medium term five year plans, as also the annual plans, for medium term and short-term phasing of the developmental activities.

The long-term perspective of an area has to be so defined as may not only be beneficial to the people belonging to the area but may also sub-serve the national objectives that are of wider interests. In other words the long-term goals of development of an area have to be set out, and the operational plans to be formulated, within the overall framework of national development.

Our national plan envisages to mitigate, as far as possible the problem of unemployment and underemployment, which have been considered as the root causes of poverty and inequality. The major thrust of unemployment and underemployment lies in rural areas because of

the seasonal character of agricultural activity and very limited scope of employment opportunities outside the agricultural sector. The segment of rural population which lives on labour earnings is therefore hard pressed for want of jobs and income opportunities in general and more so during the lean agricultural months. This segment includes small farmers and unskilled labourers, who also constitute the poorest group. The solution thus lies in creation of productive employment opportunities, as far as possible, in the non-agricultural sector. However, there appears to be little possibility of a favourable change in the structures of production and employment in the near future, if the past experience is any guide. As such, while formulating the development plan, the potentials and prospects of creation of employment within the agricultural and allied sectors cannot be undermined.

In the above background, it would be desirable to predict as to what extent favourable changes in the employment and unemployment situations may possibly take place through integrated area development over a long-term of 10 to 15 years in the block. The following section gives the long-term employment perspective of Talbehat block over a period of 15 years, along with its time phasing. The subsequent section describes the long-term strategy of development, indicating broadly, the directions in which the efforts for development have to be made. The magnitudes of the changes and the targets for the five year plan are described in Chapter 5.

3.1 Existing Situation and the Long-term (15 year) Perspective of Employment

The current population of the block is estimated at 85052, with labour force at 39.21 per cent or 33349. It has been estimated that only 14.83 per cent of the labour force in the block is adequately employed and 2.08 per cent unemployed. The residual inadequately employed thus constitute 83.09 per cent of the labour force. Here, a member of the labour force has been considered as adequately employed if he gets work for at least 9 months during a year, unemployed if he gets less than two months of work per year and inadequately employed if he get work for two months or more but less than nine months a year. The estimated numbers of adequately employed, inadequately employed and unemployed persons come to 4945, 27710 and 694 respectively in the base year. It is also estimated that the number of person-years of employment put in per 100 inadequately employed persons to about 76. This implies a back log of unemployment to the tune of 24 per cent of the inadequately employed from this category of labour force. Adding the number of unemployed, the total backlog of unemployment in the base year works out to 7344 person-years. If the present situation is allowed to continue, this annual backlog is expected to rise 8868 person-years over a decade and to 9745 person-years over a period of 15 years. But, with concerted efforts to development, following the integrated area development approach, it seems possible to create additional employment opportunities of the order of 23000 person-years during a period of 15 years. This would substantially reduce the incidence of unemployment and increase proportion of adequately employed persons in the labour force.

Table - 22 depicts the existing and projected situations of employment and unemployment over the 15 year period, along with their time phasing. Accordingly, in the longer perspective, the backlog of unemployment is likely to reduce from 7344 person-years in the base year to 4240 person-years and the proportion of inadequately employed and unemployed taken together from 85 per cent to 37 per cent. The number of adequately employed persons would simultaneously increase from 4945 (14.83 per cent of the labour force) in the base year to 27958 or over 63 per cent of the labour force over the 15 year period.

Table - 22 : Estimated Magnitudes of Employment, Unemployment And Backlog of Unemployment and Their Long-Term Projections

Description	Base Year 1980-81	1985-86	1990-91	1991-96
1. Population (No.)	85052	93455	102688	112834
2. Labour force (No.) 39.21% of (1)	33349	36644	40264	44242
3. Adequately employed persons (No.)	4945 (14.83)	12616 (34.43)	20287 (50.38)	27958 (63.19)
4. Inadequately employed (No.)	27710 (83.09)	23441 (63.97)	19489 (48.40)	15886 (35.91)
5. Unemployed (No.)	694 (2.08)	587 (1.60)	488 (1.22)	398 (0.90)
6. Number of person years of employment put in by the inadequately employed per- sons (person years)	21060	17845	14870	12161
7. Additional employment gene- rated in preceding five years (man-years)	-	7671	7671	7671
8. Backlog of unemployment in person-years (2-3-6)	7344	6222	5185	4240

Note : It has been estimated that the number of person-years of employment per 100 inadequately employed persons is 76. The figures in brackets show percentages to the corresponding labour force estimates.

3.2 The Strategy

The long term strategy is based upon the development potential and possibility of resource mobilisation in the area. As stated above, the strategy to be broadly followed over a long term would centre around creation of employment opportunities, as may be suited to the unemployed and underemployed labour force in the area. It may be mentioned that the labour absorption capacity of the primary sectors, mainly agriculture and animal husbandry, is much higher as compared to secondary and tertiary sectors not only because of technological reasons but also due to the fact that agriculture is the mainstay of the economy. Thus the additional labour requirement in response to a proportionate growth of agricultural activity in the area would be much higher than that corresponding to an equal proportionate change in secondary or tertiary sector. The strategies of sectoral development, as described below takes into consideration the existing pattern of activities and development potentials of the area. The rationale of different programmes and the magnitudes of sectoral development have been discussed for the five year plan period in Chapter 5.

3.2.1 Agricultural Development

Development of agriculture will receive the highest priority. The efforts in this direction will be two-fold, namely for increasing the area under cultivation by developing the waste lands and augmenting the productivity on the existing agricultural land by increasing the cropping intensity, bring^{ing} more area under high yielding varieties and commercial crops, and making efforts for improving upon the current package of practices. This would require, apart from extension work,

timely supply of agricultural inputs, and above all the expansion of irrigation facilities.

Development of irrigation is slightly difficult in the block because of the terrain conditions. The deep boring in the region, attempted earlier, have failed due to rock bound surface. There are thus no State tubewells in the block. Canals can be constructed to channelise water only from a reservoir. The area may benefit from a canal system from the reservoir of Shahjad dam, which is under construction. But nothing of this sort seems to be possible in the near future. Masonry wells therefore constitute the main source of irrigation. For augmenting the irrigation potential in the area. The situation calls for construction of new masonry wells, revitalisation of the existing ceased wells and installing with them pumping sets and persian wheels. For ensuring timely availability of agricultural inputs, adequate number of supply centres will also be established and suitably located.

Another problem relating to the development of agriculture is that the land is relatively less fertile and rocky as wells. The preparation of land for cultivation is relatively difficult. Animal power for agricultural operations is relatively scarce in the area because of poor quality of cattle and buffaloes. The average land holding size is relatively high. Taking these factors into consideration, mechanisation of agricultural operations, particularly ploughing, would be desirable for intensifying agricultural operations. It may be added that since wear and tear of agricultural implements is relatively more frequent in the area, it would be of considerable help to the farmers if the cultivators could also be

provided with the implements repairing facilities. Therefore, tractors and agricultural implements repair shops will be located at a few central places as could cater to the requirements of the cultivators.

3.2.2 Development of Horticulture

Talbehat block is known for its soil and climate that are specially suited for production of citrus fruits in the region. It is estimated that in a season lemons worth more than Rs.1.00 lakh are exported from the area. This activity will be geared up. Newly developed land will be allotted to the intending orchardists for plantation, and during a period of about 5 years, until the plants get matured, the orchardists will be encouraged to carry out inter-cropping of vegetables. It will have to be ensured that each patch of land to be covered under plantation is in the vicinity of irrigation wells. Thus the development of horticulture will also require construction of masonry wells on newly developed lands. Cropping of potato, ginger and other vegetables will also be encouraged under the horticulture programme.

3.2.3 Animal Husbandry and Fisheries

The cow and buffalo breeds generally found in the area are very much degenerated in terms of body weight and milk yield. The average milk yield of a milching cow is about 0.5 litre per day and that of a buffalo 1.5 litre per day. Although the number of cows and buffaloes in the area appears to be adequate, but their milk yield and draught power are too low. The efforts for breed improvement of such livestock with the help of normal cattle development programme in the area did not fructify because the hybrid animals imported

from outside could not sustain the climate on the one hand and scarcity of fodder on the other. Efforts will therefore be made to improve the quality of the existing cows and buffaloes with the help of non-descript or local improved varieties of animals. Apart from that cows and buffaloes of local improved varieties will be distributed in adequate numbers to the benefit of the weaker sections, and their proper utilisation will be ensured.

Another major activity that has considerable potential in the area is goat rearing, which is an important subsidiary occupation amongst the small landholders and landless people, particularly the scheduled castes. The local goats are also superior to their counterparts in most other parts of the State. Efforts will therefore be made to encourage the goat rearing activity, by distributing goat to the intending rearers and taking adequate safeguards against the risks and losses due to unusual circumstances that the rearers may come across. This would help a long way to ameliorating the economic condition of the rural poor. Apart from that poultry will also be encouraged as far as possible, since there exists potential demand for poultry products in the area.

Fisheries has been confined in the block mainly to the State reservoir. There are however quite a few ponds in the block which can be improved and used for stocking of fish. An effort will be made in this direction by organising fishermens cooperative societies and providing them necessary guidance and assistance.

3.2.4 Industrial Development

Talbehat is one of the industrial growth centres identified by the Government. There is scope for setting up agro-based, forest-based and mineral based industrial units, apart from such modern industries for which raw materials have even to be imported. There is also a sub-unit of the District Industries Centre, Lalitpur, in the block Talbehat for facilitating and attracting industrial activities. Quite a few schemes like differential rate of interest on industrial loan, outright subsidy on capital investment, interest-free loaning, provision for arrangement of scarce material inputs through Government quota system and subsidy on travel expenses are already in operation in the area. All these institutional arrangements do not however appear to be effective in boosting up industrial development. Cumbersome procedures in obtaining assistance and help through the District Industries Centre, inefficacy of the incentives to off-set the extra cost of carrying out industrial activity in Talbehat vis-a-vis other more developed places and lack of infrastructural facilities are the major factors responsible for slow industrial progress in the area. The working of the district industries centre will have to be streamlined and it will have to be ensured that the desired services are promptly rendered to the entrepreneur. Simultaneously, road and power development programmes will be taken up for filling the infrastructural gaps.

3.2.5 Road and Power

The requirement of road and electricity in the area will be established not only from the point of view of providing necessary production infrastructure but also as a means to improve the general

living conditions of the people. The possibility of providing road and electricity to all the villages in near future is however remote. For growth, dispersion and diversification of activities, the central places in the block will play a vital role. Looking at the present situation in the block, pucca road and electric power facility will be made available first at the central places. In laying down the road net work and power lines, the connecting villages will also be served with these facilities. In case of electrification, care will be taken to provide electricity to relatively large size villages falling along the power lines being extended to the central places.

The magnitudes of changes to be brought into the policy variables over a long period would however be difficult to determine. As regards the five year targets, they have already been given elsewhere. However, it seems to be possible to at least maintain the pace of creation of employment opportunities in the area of the order as proposed for the five year plan. The magnitudes of employment expected to be generated in different sectors of the economy through the initial five year period of integrated area development are presented in the Annexure - 3.

CHAPTER 4

The Integrated Area Development Approach

4.1 The Concept

During the initial two decades, the main burden of the task of planning in our country was to work out strategies and proposals for sectoral development. Moreover, the plans were prepared at the aggregative levels. As such, little or no attention was paid towards an appropriate dispersal of functions and facilities over space as could be more conducive to growth and spread of the process of development. There was no scientific approach in operation in the then existing system of planning as could increase the pace of development of a region or sub-region.

With the introduction of lower level planning during the Fourth Plan, towards more efficient use of local resources and skills, the need for having some criteria for dispersal of facilities and functions, particularly in the rural areas, was imminent. It is in this background the concept of integrated area development was introduced in working out the operational plans for smaller areas.

A relevant question may however be raised in relation to the integrated area development planning, namely what or how small should be the most appropriate unit of planning. In fact, the issue of appropriateness of planning units, in terms of size, has been debatable. It is argued that the policy framework of development can be more realistically and effectively evolved for smaller areas as they are more homogeneous in terms of natural endowments, levels of development and behaviour and attitudes of the people. On the other hand, given the resource constraints, it is neither possible nor feasible to provide for all the facilities required for

socio-economic in a small settlement. For economic planning therefore a village does not appear to be an ideal unit of planning within the framework of integrated area development.

It may however be a feasible proposition to provide certain kinds of facilities at certain places as could cater to different groups of villages. Such places are referred to as central places. These places or locations serve as centres of convergence as well as of diffusion. If they are better served with overheads, they are deemed to offer opportunities of employment and attract labour and entrepreneurs from the peripheral areas. On the other hand, greater availability of the overheads at these locations generates growth impulses in their zones of influence. The process is visualised as the result of greater spatial and functional integration in the area. While spatial integration implies greater inter-dependence and linkages among the activities of different settlements, the functional integration means a more coordinated expansion of social and economic services, required for overall development of a sub-region. Public investments for equipping a central place with the needed 'service' functions are likely to produce a multiplier effect on the pace of development in the whole of its zone of influence.

There are another two important questions relating to the operationalisation of the concept of integrated area development planning. They are : first, as to how the central places can be located and second, which would be the appropriate set of functions for a central place. The methods of locating central places and proposing the functions are described subsequently, followed by a description of the settlement pattern of the block, and characteristics of the central places.

It may however be mentioned here that in a block area, one may generally find three categories of central places, namely growth centres, service centres and central villages. The functions/facilities available and required at these central places are presented in Annexure - 1, along with their total numbers in the block, classified by their hierarchy, namely, lower order, middle order and higher order functions.

4.2 Method

The methods usually adopted for identification of central places are scalogram analysis, population threshold and ranking of central places. The scalogram analysis is based on a scale developed by L. Guttman and the population threshold has been demonstrated by Berry and Carriseion. One major problem with the scalogram method is that it becomes difficult to identify functional gaps at particular locations. This is the case where higher order functions are found in a lower order settlement, and those higher order functions do not exist in the higher order settlements. Similarly, the ranking of settlements on the basis of median population threshold suffers from a basic limitation, that it is not merely a minimum size of population of a settlement that determines the necessity and feasibility of certain kinds of facilities for that settlement. In fact the viability of functions at a place is to be judged on the requirements of the people of the adjoining settlements too, to the extent such linkages exist.

In view of the above observations, we have adopted the method of ranking of settlements on the basis of their functional hierarchy. There too it is possible to determine the hierarchy of central places

either on the basis of population threshold or by working out centrality score. But since we have already discarded the use of population threshold method, as stated earlier, we have in the present case ranked the settlements on the basis of centrality scores, as the weighted sum total of the functions obtaining in a settlement. The weight for individual functions has been obtained by dividing the total number of settlements in the block by the total number of that particular function obtaining in the block. The weights assigned to different functions are shown in the Table - 23. Having ranked the settlements, the cut-off points, determining the hierarchy groups of the settlements have been located on the centrality scores. It is also important to point out here that the data used in this

Table - 23 : Weights Assigned to Various Functions of Facilities

Sl. Functions/Facilities No.	Weights	Sl. Functions/Facilities No.	Weights
1. Primary School	1	21. Commercial Bank	52
2. Post Office	5	22. Family Welfare Centre	17
3. Private Medical Practitioner	5	23. Primary Health Centre	103
4. Electricity	15	24. Railway Station	34
5. Multi-Purpose Cooperative Society	11	25. Hospital	103
6. Pucca Road	4	26. Fertilizer and Pest. Distribution Centre	15
7. Controlled Cloth Shop	17	27. A.I. Centre	103
8. Junior High School	7	28. Cooperative Bank	103
9. Bi-weekly Market	11	29. Police Station	103
10. Seed Distribution Centre	26	30. Post Office with Telephone	26
11. Stockman Centre	34	31. Telegraph Office	103
12. Bus Stop	8	32. Regulated Market	103
13. A.I. Sub-Centre	34	33. Cinema Hall	103
14. M.C.W. Sub-Centre	21		
15. Dispensary	17		
16. Police Out Post	25		
17. Chemist & Druggist Shop	34		
18. Agri. Impl. Repairing Shop	34		
19. Veterinary Hospital	103		
20. Higher Secondary School	103		

exercise was collected directly from the VLWs of the block and is thus represents the current status of the area in terms of the facilities available there. Obviously, this data is different than that used for comparing the levels of development between the block and the district as a whole.

4.3 The Settlement Pattern

The total number of inhabited villages in the block is reported to be 102; the village Nagda is un-inhabited. The total number of settlements in the area are thus 103, including Talbehat proper which is a Town Area. There is considerable amount of variation in population size from one village to another. According to the current population estimates, some villages have a population of around 50 each, about 55 per cent fall in the size group of upto 500, and quite a few villages have a population of more than 1000 each. The Table - 24 shows the distribution of rural settlements (villages) by population size groups. Accordingly majority (80 per cent) of the villages fall in the size group of upto 1000. The proportion of

Table - 24 : Distribution of Rural Settlements by Estimated Size of Population

Sl. No.	Population Size Group	Number of Settlements	Percentage to Total	
			Number of Settlements	Population
1.	≤ 200	18	17.65	2.71
2.	201 - 500	38	37.25	18.55
3.	501 - 1000	26	25.49	24.43
4.	1001 - 3000	18	17.65	37.79
5.	3001 - 5000	1	0.98	4.49
6.	≥ 5001	1	0.98	12.03
Total		102	100.00	100.00

small villages (upto 200) is only about 18 per cent. More than 25 per cent of the villages fall in the range of 501 - 1000, while the villages having a population about 1000 constitute about 20 per cent of the total number. It may however be pointed out that the biggest village of the block is Khandi (Talbehat rural) with an estimated population of about 9000.

4.4 Central Places

It is normally expected that the quantity and quality of functions obtaining at a particular place are guided by the absolute and relative population size distribution across the settlements. Exceptions are however there because of differences in endowment conditions, the overall profiles of the economy and society, and locational characteristics of settlements.

The aforesaid inter-relationship is evident, to certain extent from the list of the top few settlements arranged in descending order of their centrality scores as shown in Table - 25. The number of different functions available in the block are shown in Annexure - 1.

The eight settlements from the top, as shown in Table - 25, except Bijrotha, Bhuchera and Serbans Kalan are in the descending order of the population size. The characteristics of the bottom seven settlements do not indicate a systematic relationship between the size of population and the centrality score, mainly on account of locational factors. While Terai, Karesra Kalan, Nathi Khera, Sunaura and Bamori Sar villages are located very close to one or the other central places from amongst the first eight, Khandi adjoins

Table - 25 : List of Top 15 Villages in Discending Order of Centrality Score and Their Current Population Estimates

Sl. No.	Settlements	Population	Centrality Score
1.	Talbehat	10918	1566
2.	Pura Kalan	3328	291
3.	Birdha	1849	200
4.	Banguan Kalan	1357	196
5.	Bijrotha	1849	154
6.	Jamalpur	1230	116
7.	Bhuchera	1615	92
8.	Serbans Kalan	1794	88
9.	Terai	1230	80
10.	Karesra Kalan	2987	55
11.	Nathi Khera	1174	54
12.	Dhangol	1060	52
13.	Sunaura	428	45
14.	Bamori Sar	1080	43
15.	Khandi	8920	42

Talbehat proper, which is a Town Area. Thus Khandi village, instead of developing as a central place, remains a peripheral settlement of Talbehat, though the population of Khandi is highest among all the villages. For operational purposes therefore we have selected only Dhangol from amongst the bottom seven settlements, along with the first eight settlements as central places.

On the basis of the centrality score, we find a considerable difference between Talbehat (1566) and Pura Kalan (291), and between the latter and other settlements. The lower order settlements are not so different from one another in that sequence. We have therefore selected Talbehat as the growth centre, Pura Kalan as service centre

and remaining settlements as central villages, excluding Terai, Karesra Kalan, Nathi Khera, Sunaura, Bamori Sar and Khandi (Table - 26).

Table - 26 : The Selected Central Places

Growth Centre	Service Centre	Central Villages
1. Talbehat	1. Pura Kalan	1. Birdha 2. Banguwan Kalan 3. Bijrotha 4. Jamalpur 5. Bhuchera 6. Serbans Kalan 7. Dhangol

4.5 Functions and Facilities Required at the Central Places

The present exercise is based on a presumed matching of the hierarchy of settlements and the hierarchy of functions. Thereby, a lower order settlement should normally have all the lower order functions. If a function is missing, there could be any number of reasons for that but here it may be assumed that provision for that particular function in the area would fill in the functional gap and thereby strengthen the functional as well as spatial linkages.

Similarly if a higher order centre misses any of the higher order functions, making available that function in the area could foster the process of development. In operationalising this concept, care will be taken to propose only such functions in a central place which are missing and also not available in adjoining or nearby villages, in order to avoid wastage of resources, provided the particular facility available in the adjoining village is deemed to serve the purpose. Besides some of the facilities have been proposed as found further necessary for development of different sectors of the economy.

From the current information collected from VLWs of all the VLW circles in Talbehat block, we find that the settlements of Pura Kalan and Talbehat, which we have selected as service centre and growth centre respectively, have by and large all the lower order functions. Similarly, Talbehat has almost all the functions required at a service centre. The rationale of identifying the functional gaps, and making proposals for them therefore confines to a sort of matching of the hierarchy of settlements with the hierarchy of functions. Table - 27 shows the available and proposed functions of the selected one growth centre, Talbehat, one service centre, Pura Kalan and the seven central villages. The Annexure - 2 gives the existing and proposed facilities for all the villages of the block.

Table - 27 : Existing and Proposed Functions for the Selected Central Places

Central Places	Existing Functions	Proposed Functions
1	2	3
A. GROWTH CENTRE		
1. Talbehat	Primary School, post office, Mini-Agro service private medical practitioner centre with one tra- electricity, multi-purpose ctor, Cold storage, cooperative society, pucca Degree college road, controlled cloth shop, junior high school, bi-weekly market, seed distribution centre, bus stop, A.I. centre, MCW centre, Dispensary, police outpost, chemist and druggist, agricultural implements repairing shops, veterinary hospital, higher secondary school, commercial bank, family welfare centre, primary health centre, railway station, hospital, fertilizer and pesticide distribution centre, cooperative bank, police station with telephone, telegraph office, regulated market, cinema hall	

1	2	3
---	---	---

B. SERVICE CENTRE

- | | | |
|---------------|--|--|
| 1. Pura Kalan | Primary school, post office, multi-purpose cooperative society, road, controlled cloth shop, senior basic school, bi-weekly market, bus stop, MCW centre, dispensary, police outpost, agricultural implements repairing shop, commercial bank, family welfare centre, primary health centre, fertilizer and pesticide distribution centre, post office with telephone. | Mini Agro service centre with one tractor, veterinary hospital, higher secondary school, chemist and druggist shop, cooperative bank, police station |
|---------------|--|--|

C. CENTRAL VILLAGES

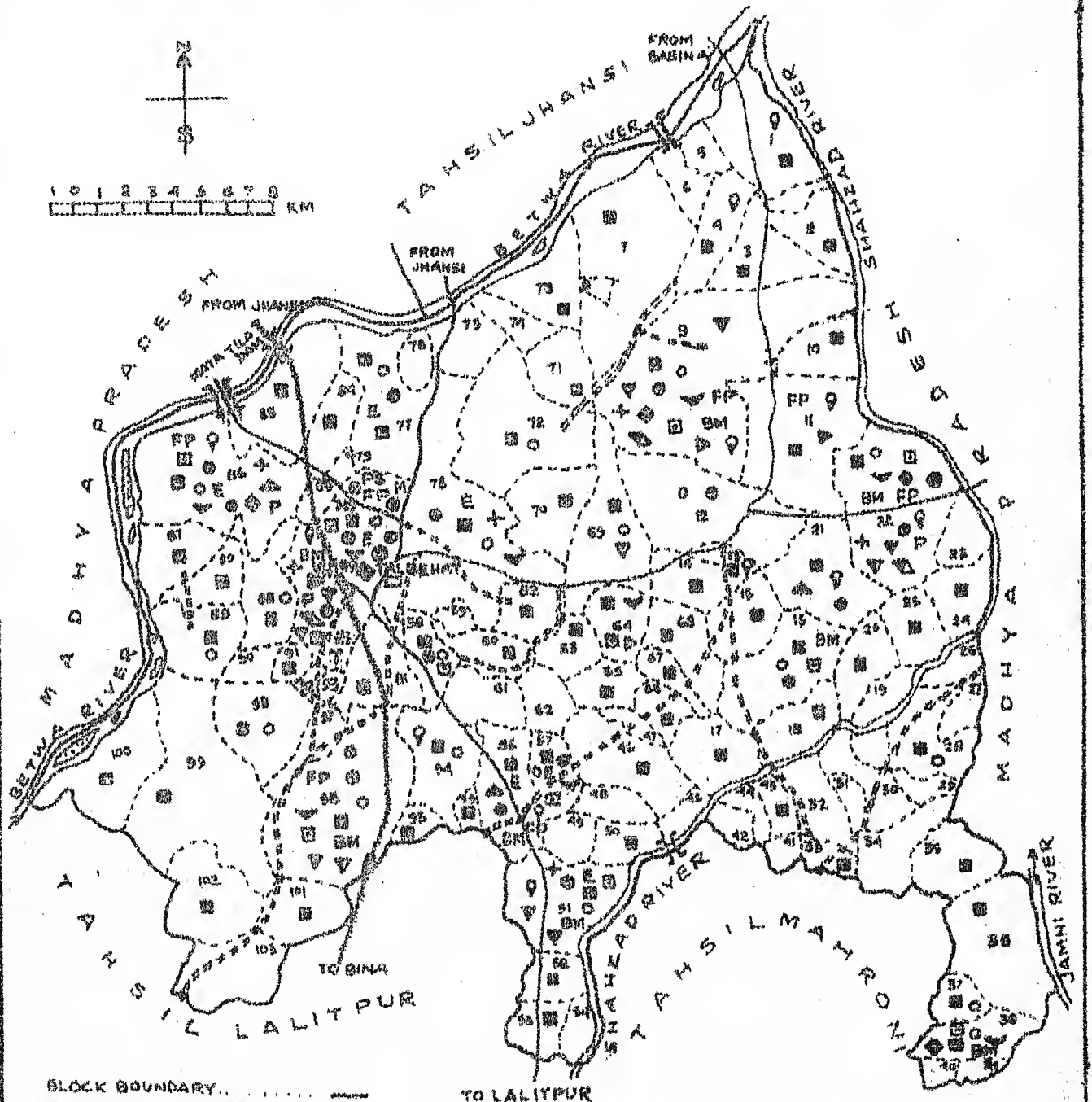
- | | | |
|------------------|--|--|
| 1. Birdha | Primary school, post office, private medical practitioner multi-purpose cooperative society, road, controlled cloth shop, senior basic school, bi-weekly market, seed distribution centre, bus stop, MCW centre, dispensary, agricultural implements repairing shop, family welfare centre, fertilizer and pesticide distribution centre | Electricity, stockman centre, A.I. sub-centre, police outpost, chemist and druggist shop |
| 2. Bunguan Kalan | Primary school, post office, private medical practitioner electricity, multi-purpose cooperative society, controlled cloth shop, road, stockman centre, A.I. sub-centre, senior basic school, bus stop, dispensary, police outpost, fertiliser and pesticide distribution centre. | Bi-weekly market, seed distribution centre, MCW centre, chemist and druggist shop |

1	2	3
3. Bijrotha	Primary school, post office, private medical practitioner multi-purpose cooperative society, senior basic school, bi-weekly market, MCW centre, family welfare centre, railway station, fertilizer and pesticide distribution centre, post office with telephone	Electricity, controlled cloth shop, road stockman centre, seed distribution centre, bus stop, A.I. sub-centre, dispensary, police outpost, chemist and druggist shop
4. Jamalpur	Primary school, post office, private medical practitioner electricity, senior basic school, road, bi-weekly market, bus stop, MCW centre, dispensary, family welfare centre	Multi-purpose cooperative society, controlled cloth shop, stockman centre, seed distribution centre, A.I. sub-centre, police outpost, chemist and druggist shop
5. Bhuchera	Primary school, post office, stockman centre, A.I. sub-centre, senior basic school, bi-weekly market	Private medical practitioner, electricity, multi-purpose cooperative society, controlled cloth shop, road, bus stop, seed distribution centre, MCW centre, dispensary, police outpost, chemist and druggist shop
6. Sarebans Kalan	Primary school, post office, private medical practitioner electricity, multi-purpose cooperative society, pucca road, senior basic school, weekly market, bus stop, fertilizer and pesticide distribution centre	Controlled cloth shop, seed distribution centre, MCW centre, dispensary, police outpost, chemist and druggist shop
7. Dhangol	Primary school, post office, multi-purpose cooperative society, controlled cloth shop, senior basic school, bi-weekly market	Mini-agro service centre, private medical practitioner, electricity, road, stockman centre, seed distribution centre, bus stop, A.I. sub-centre, MCW centre, dispensary, police outpost, chemist and druggist shop

Note : Maps 2, 3 and 4, showing 'Existing Socio-Economic Facilities, Identified Central Places and Proposed Functions/Facilities at Central Places' in the block are placed at pages 71 a, 71 b and 71 c.

TALBEHAT BLOCK-LALITPUR U.P. EXISTING SOCIO-ECONOMIC FACILITIES

Map 2



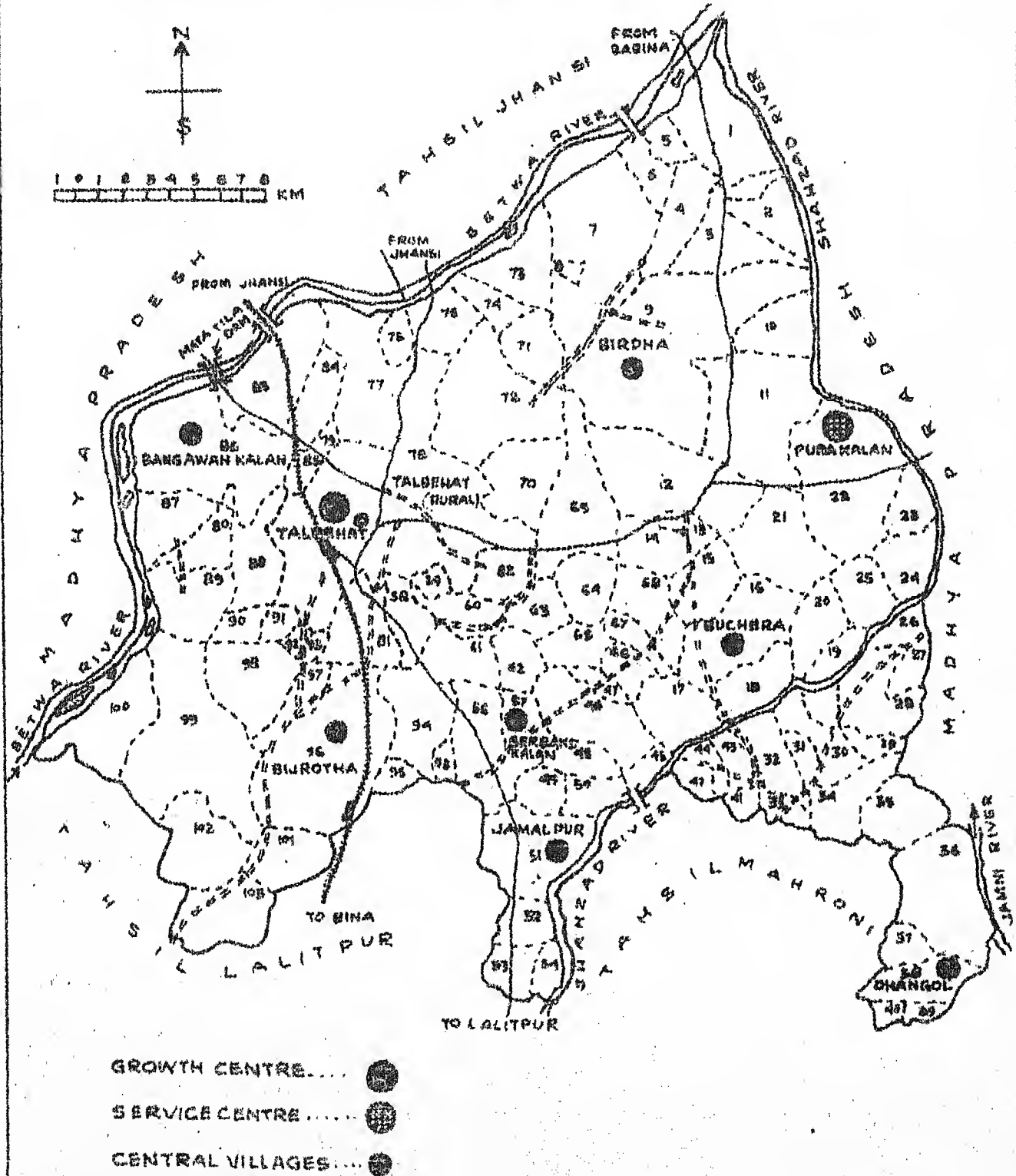
- BLOCK BOUNDARY.....
 BLOCK HEADQUARTER.....
 RAILWAY LINE WITH STATION.....
 ROAD PUECA.....
 ROAD KACHHA.....
 RIVER.....
 DAM.....
 PRIMARY SCHOOL.....
 JUNIOR HIGH SCHOOL.....
 HIGHER SECONDARY SCHOOL.....
 BUS STOP.....
 POST OFFICE.....
 POST OFFICE WITH TELEPHONE.....
 TELEGRAPH OFFICE.....

- PRIVATE MEDICAL PRACTITIONER.....
 ELECTRICITY.....
 M.A. CO-OPERATIVE SOCIETY.....
 CONTROLLED CLOTH SHOP.....
 BI-WEEKLY MARKET.....
 SEED DISTRIBUTION CENTRE.....
 STOCK MAN CENTRE.....
 A.I. SUB CENTRE.....
 M.C.W. CENTRE.....
 DISPENSARY.....
 POLICE OUTPOST.....
 CHEMIST/DRUG SHOP.....

- V. HOSPITAL.....
 A.I. CENTRE.....
 COMMERCIAL BANK.....
 COOP. BANK.....
 F.W. CENTRE.....
 P.H.C.....
 HOSPITAL.....
 FERT. & PEST DIST. CENTRE.....
 POLICE STATION.....
 REGULATED MARKET.....
 CINEMA HALL.....
 ADL. IMP. REPAIR SHOP.....

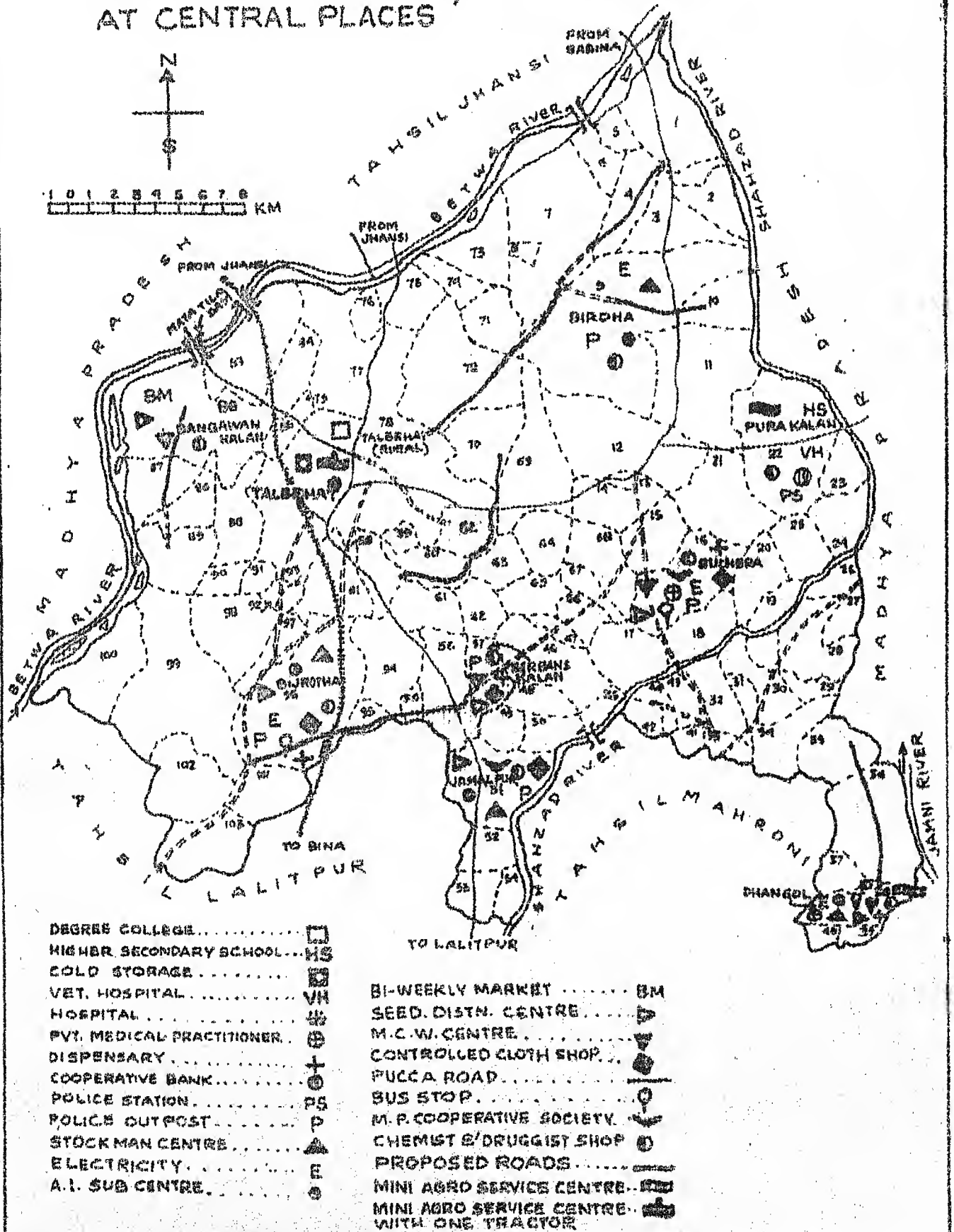
TALBEHAT BLOCK- LALITPUR U.P. IDENTIFIED CENTRAL PLACES

Map 3



TALBEHAT BLOCK-LALITPUR · U.P.

Map 4

PROPOSED FUNCTIONS/FACILITIES
AT CENTRAL PLACES

CHAPTER 5

Proposed Programmes For the Five Year Plan

The proposals for various programmes, as described in this chapter are based on the existing levels of development, predominant activity structure, resource potentials, production technologies in vogue, socio-economic background and aspirations of the people. An attempt has been made to ensure functional as well as spatial integration of the process of development by adopting the integrated area development approach in working out the proposals. The proposals are deemed to subserve the long term objective of attaining growth and its dispersal in remote areas in such a manner as could make a perceptible dent on the problems of unemployment and underemployment, in conformity with the long-term perspective of development. The programme proposals for the plan period 1981-86 are described in the following sections.

5.1 Agriculture

Agriculture is the predominant activity and main occupation of 89 per cent of the workers in the block. Uneven and rocky surface of land and the stretch of red 'rankar' soil are typical characteristics of the area, rendering the agricultural productivity low and cultivation difficult. Consequently the culturable waste land in the block is as high as 35.60 per cent (25921 hectares) of the reporting area. Low rainfall accompanied with lack of irrigation has further constrained the development of agriculture. Although there is scope for bringing more land under agriculture, it is possible if irrigation facilities are also simultaneously developed. The expansion in irrigation facilities will have to be so visualised

as to be more intensive in the already irrigated areas and to help in bringing additional land under cultivation.

Expansion of irrigation facilities in relation to the cultivated area will help in raising the productivity of land by shifting cropping pattern from inferior to superior and from low value to high value crops, increasing the levels of seed and fertilizer inputs, changing the crop rotation, and increasing the intensity of cropping. Visualised in this perspective, the agricultural profile of Talbehat block in the year 1985-86 would be as described below, provided concerted efforts are made in the proposed directions.

5.1.1 Land Use Pattern

At present more than 35 per cent of the reporting area is constituted by the culturable waste lands. The net cultivated area of the block is estimated at 20813 hectares, as sum total of the net area sown and the fallow land. It is proposed to bring 2592 hectares (10 per cent) of the culturable waste area under cultivation. From this additional area, about 20 hectares will be utilised for plantation of citrus fruit orchards and 2572 for agriculture. The net cultivated area will thus rises to 23385 hectares in 1985-86. At the same time the fallow land area may rise to 6226 hectares, if the proportion of falloe land to net cultivated area is kept from increasing. The net area sown in the year 1985-86 would be of the order of 17200 hectares, as shown in Table - 28. Towards this end a little more than 500 hectares of the waste lands may be developed every year. This would involve considerable amount of soil-work to make the land fit for cultivation, and creation of irrigation facilities. The proposals for irrigation development have been made in a separate section.

Table - 28 : Proposed Land Use Pattern for the Terminal Year of the Plan

Sl. No.	Description	Area (Ha.)
1.	Reporting area	72812
2.	Forest	10452
3.	Culturable waste	23328
4.	Fallow land	6226
5.	Barrent and unculturable land	7011
6.	Land put to non-agricultural uses	8110
7.	Pastures	420
8.	Miscellaneous trees and groves not included in net area sown	106
9.	Net area sown	17159
10.	Area sown more than once	12561
11.	Gross cropped area	29720
12.	Intensity of cropping	173.20

5.1.2 Cropping Pattern and Cropping Intensity

With increase in irrigation facilities in terms of both intensity and net coverage, the cropping pattern is likely to change. The changes in the area under individual crops would be in terms of shifts from unirrigated to irrigated crops, inferior to superior food crops and from low value to high value crops apart from additional areas brought under the crops on newly developed lands. The total area under important kharif and rabi food crops for the base year is estimated at 20153 hectares for the block. The commercial crops accounted for 913 hectares. The total cropped area (for the reported crops) in the base year is thus 21077 hectares, and the gross cropped area 24301.

A period of five years is however not expected to bring a substantial change in the cropping pattern. Yet, keeping in view the local potentials, the existing infrastructural facilities and attitudes of the people, the area under food crops is expected to increase from 20153 hectares in the base year to 26203 hectares, i.e. by around 30 per cent, and that of commercial crops from 913 hectares to 1238 hectares, or by over 35 per cent in the terminal year of the plan period. The areas under different crops groups as proposed for the year 1985-86 are shown in Table - 29. Accordingly, the percentages of cereals and pulses areas to the gross cropped area will be 73.39 and 14.77 respectively and that for the commercial crops 4.17. Certain local crops that are relatively inferior and not classified among the reported crops, accounting for 3235 hectares (13.31 per cent of gross cropped area) in the base year, would have a smaller coverage, estimate at 2279 hectares or only 7.67 per cent of the gross cropped area in the terminal year.

Table - 29 : Proposed Area Under Different Crop Groups for the Terminal Year of the Plan

Crop Groups	Area (Ha.)	Percentage to Total
1. CEREAL CROPS (Total)	21814	73.39
1.1 Kharif	9034	30.39
1.2 Rabi	11980	40.31
1.3 Zaid	800	2.69
2. PULSES (Total)	4389	14.77
2.1 Kharif	2418	8.14
2.2 Rabi	1971	6.63
2.3 Zaid	-	-
3. FOOD CROPS (Total)	26203	88.16
3.1 Kharif	11452	38.53
3.2 Rabi	13951	46.94
3.3 Zaid	800	2.69

Table - 29 (contd.)

Crop Groups	Area (Ha.)	Percentage to Total
4. COMMERCIAL CROPS (Total)	<u>1238</u>	<u>4.17</u>
4.1 Oilseeds	954	3.21
4.2 Sugarcane	86	0.29
4.3 Potato	76	0.26
4.4 Ginger and other vegetables	75	0.25
4.5 Sann-hemp	45	0.15
4.6 Tobacco	2	0.01
5. CROPS NOT CLASSIFIED	<u>2279</u>	<u>7.67</u>
TOTAL	29720	100.00

The above composition of the crop groups would emerge from changes in the coverage of individual crops. It is expected that, as a result of emphasis on high yielding varieties of paddy and wheat, it would not be difficult to increase the kharif paddy and wheat areas, to the level of 3814 hectares for paddy and 10040 hectares for wheat. Some paddy is also grown in the block during zaid season. It is proposed to bring the zaid paddy area from the base year 93 hectares to 400 hectares. The zaid paddy is grown under irrigated conditions. With the expansion of irrigation facilities, it would not be difficult to ensure an increase of the said order in the zaid paddy area. Thus the total paddy area in the block in the terminal years would be more than 4200 hectares as shown in Table - 30. Among the classified food crops, the highest area coverage would be for wheat, followed by paddy, maize, barley and urd. Among the commercial crops, oilseeds will account for the major share (Til 901 ha., groundnut 50 ha., linseed 3 ha., - total 954 ha.), followed by vegetables including potato (potato 75 ha., ginger 25 ha., and other vegetables 50 ha., - total 151 ha.).

Table - 30 : Proposed Area Under Different Crops for the Year 1985-86

Crops	Area (Ha.)	Percentage to Gross Cropped Area
1. Paddy	4214	14.17
2. Maize	4196	14.12
3. Jowar	334	1.12
4. Urd	1919	6.46
5. Moong	499	1.68
6. Small millets	1090	3.67
7. Wheat	10040	33.78
8. Barley	1940	6.53
9. Gram	1046	3.52
10. Pea	140	0.47
11. Masur	785	2.64
12. Linseed	3	0.01
13. Til	901	3.03
14. Sugarcane	86	0.29
15. Groundnut	50	0.17
16. Tobacco	2	0.01
17. Sann-hemp	45	0.15
18. Potato	76	0.26
19. Ginger	25	0.08
20. Other vegetables	50	0.17
21. Other crops (not classified above)	2279	7.67
Total	29720	100.00

Note : 1. The paddy, maize and small millets areas reported in the table comprise the corresponding kharif areas (hectares) of 3814, 3896 and 990 and zaid areas of 400, 300 and 100 respectively.

2. Small millet crops comprise mandua, sawan, kodon, kakun and kutki. During zaid season, sawan is also grown in the block.

The above described cropping pattern is likely to emerge as a result of the package of agricultural development programmes. It is envisaged that the area under double cropping will increase from 9029 hectares in the base year to about 12600 or by 39 per cent in the terminal year of the plan. This implies an increase in the gross cropped area from 24301 hectares to 29720 or by over 22 per cent and that in the cropping intensity from 159.12 to 173.20, that is by about 14 percentage points.

5.1.3 Crop-Rotation

The increase in cropping intensity implies a relative increase in the area under double or multiple cropping. Keeping in view the fact that the coverage of long standing crops such as arhar is nil and that of sugarcane quite low, it is feasible to raise the existing cropping intensity of 159.12 per cent to the level of 173.20 per cent in a period of five years. This is possible by ensuring an appropriate crop rotation. The usual practice in the block is that on unirrigated lands jowar and small millet crops are grown. This land is left fallow during the rabi season, although in some cases gram is also sown on these lands. In irrigated areas, wheat is grown after the harvesting of early paddy. Sowing of mixed crops, namely wheat and gram, wheat and barley or barley and gram is very common during the rabi season. The area under zaid crops is also quite low, and can also be increased for increasing the intensity of cropping. The suggestive crop rotations for Talbehat block are depicted below.

i. Early paddy	- wheat with mustard
ii. Early paddy	- gram with rapeseed
iii. Maize	- gram with rapeseed
iv. Maize	- wheat with mustard
v. Maize	- Potato, other vegetables, fodder
vi. Jowar	- Gram with rapeseed
vii. Til	- wheat
viii. Groundnut	- wheat

It may be pointed out here that a considerable part of the land would remain unirrigated in spite of an expansion in irrigation facilities through the plan period. Keeping in view the problem of scarcity of fodder in the area, it is suggested to ensure, as far as possible, the cultivation of fodder during kharif season on unirrigated lands. After the kharif fodder is harvested, the land can be utilised for growing barley crop. On irrigated lands, emphasis has to be laid on vegetable cultivation during rabi as well as zaid seasons.

5.1.4 Yield rates and Levels of Production

With the expansion of irrigation facilities and greater attention towards ensuring improvement in the variety and levels of inputs and package of practices, the yield rates of different crops would rise through the plan period. It is expected that the yield rate (in terms of quintals per hectare) of paddy would increase from the existing 5.21 to 7.25, maize from 11 to 12, wheat from 12 to 12.50, gram from 5.24 to 5.50, sugarcane from 451 to 475 and potato from 153 to 170 through the five year plan period.

The yield rates of important crops and their levels of production are projected for the terminal year of the plan as shown in the Table - 31. Accordingly, the total foodgrain production in the block is expected to be over 25000 tonnes. Taking into consideration the current population estimate of 85052 for the block, the per capita per day foodgrains production averages to 807 gms. Taking the average per capita consumption requirement of 475 gms. per day, the annual foodgrain production of the area is expected to be a surplus of about 10300 tonnes over the consumption requirement by the end of the plan. The increase in foodgrains production in the area not only conforms to the objective of increasing agricultural production in general, but it would also go a long way towards increasing the disposable income of the rural people. Similar is the case for augmenting production of the commercial crops. The production levels of major and quantifiable commercial crops have also been projected and shown in the Table - 31.

Table - 31 : Yield Rates and Levels of Production of Important Crops by the Terminal Year of the Plan

Crops	Yield Rate Qtl./ha.	Total Production Quintals
<u>Kharif (Food)</u>		
1. Paddy	7.25	30552
2. Maize	12.00	50352
3. Jowar	5.50	1837
4. Moong	2.50	1248
5. Urd	2.75	5277
6. Small millets	5.97	6507

Table - 31 (contd.)

Crops	Yield Rate Qtl./ha.	Total Production Quintals
<u>Rabi (Food)</u>		
7. Wheat	12.50	125500
8. Barley	10.00	19400
9. Gram	5.50	5753
10. Pea	7.00	980
11. Masur	3.80	2983
<u>Commercial Crops</u>		
12. Til	1.50	1352
13. Sugarcane	475.00	40850
14. Potato	170.00	12920
15. Groundnut	7.50	375
TOTAL CEREALS (1+2+3+6+7+8)		234148
TOTAL PULSES (4+5+9+10+11)		16241
TOTAL FOODGRAINS (1 to 11)		250389

Note : Other crops 'not classified' earlier have not been considered in the table.

5.1.5 Coverage of High Yielding Varieties

The trends in the coverage of high yield varieties of crops in the block area indicate that among the five major HYV crops, namely paddy, wheat, maize, jowar and bajra, only the former two have gained grounds. The possibility of bringing some area under HYV maize is also there. For success of the high yielding varieties programme, assured irrigation facilities and timely availability of seed, fertilizer and pesticides inputs are necessary. At the same time, a take-off in coverage of these HYV crops would necessarily require field demonstrations. The proposed coverage of high yielding varieties in the block by the end of the five year plan period is shown in Table - 32.

Table - 32 : Proposed Coverage of HYV Crops During the Plan Period

Description	Paddy	Maize	Wheat	Total
1. Base year area (Ha.)	1007	-	6222	7229
2. Annual targets in terms of additional area (Ha.)	100	60	700	860
3. Five year target in terms of additional area (Ha.)	500	300	3500	4300
4. Total coverage by the terminal year of the plan (Ha.)	1507	300	9722	11529
5. Percentage of HYV variety to total area under the crop				
5.1 Base year (%)	30.39	-	95.14	53.15
5.2 Terminal year (%)	35.76	7.15	96.83	62.49

The total increase in the HYV area through the plan period would be of 4300 hectares to reach the level of 11529 hectares in the year 1985-86. This implies about 60 per cent increase in the HYV area over the base year. As to the individual crops, despite an increase in their coverage, the percentage of HYV area to total cropped area for paddy would be 35.76 (base year 30.39), for maize 7.15 (base year nil) and for wheat 96.83 (base year 95.14). It is however necessary to indicate the major input requirements for the HYV crops with a view to ensuring their timely availability to the farmers.

The quantities of seeds required in the region per hectare of the high yielding varieties of paddy, maize and wheat are assessed at 18 kg., 15 kg. and 100 kg. For each of these crops, the per hectare requirements of fertilisers in terms of nutrients would be : $N_2 = 80$ kg., $P_2O_5 = 40$ kg. and $K_2O = 40$ kg., totalling to 160 kg. It is assumed that the financing from the current plan resources would not be necessary for maintenance of the HYV coverage already

achieved till the base year. Further, during the plan period, the financing for the HYV development in a particular year would be required only for that part of area coverage which has to be brought in addition to the level achieved by the previous year. This implies that the maintenance of the HYV coverage till a past year will be taken care by the cultivators themselves with the help of the already existing institutional arrangements. Following the above basis the total financial requirement for the proposed coverage of the high yielding varieties is shown in Table - 33.

Table - 33 : Material and Financial Requirements for the Proposed Coverage of the HYV Crops

Description	C r o p s			Total
	Paddy	Maize	Wheat	
1. <u>Seed</u>				
1.1 Quantity (Qtls.)	90.00	54.00	3500.00	3644.00
1.2 Value (lakh Rs.)	0.36	0.27	8.75	9.38
2. <u>Fertilizer</u>				
2.1 Quantity				
a) N ₂ (Qtl)	400.00	240.00	2800.00	3440.00
b) P ₂ O ₅ (Qtl)	200.00	120.00	1400.00	1720.00
c) K ₂ O (qtl)	200.00	120.00	1400.00	1720.00
2.2 Value (Lakh Rs.)	2.28	1.37	15.96	19.61
3. <u>Pesticides</u>				
3.1 Quantity (qtl.)	250.00	225.00	2160.00	2635.00
3.2 Value (Lakh Rs.)	0.69	0.62	5.94	7.25
4. <u>Total Outlay (Lakh Rs.)</u> (1.2 + 2.2 + 3.2)	3.33	2.26	30.65	36.24
5. <u>Subsidy (Lakh Rs.)</u> ($\frac{1}{3}$ of outlay)	1.11	0.75	10.22	12.08

The total financial requirement (or outlay) works out to Rs.36.24 lakhs. Since majority of the cultivators would be finding it difficult to initially bear the input costs in totality, a subsidy to the extent of 33.3 per cent of the costs of seeds, fertilizers and pesticides is therefore recommended. The subsidy component would thus be Rs.12.08 lakhs.

In order to increase awareness and confidence among the cultivators, field demonstrations in respect of the HYV cropping will also be necessary. It is proposed to carry out 75, 20 and 20 demonstrations of HYV paddy, maize and wheat respectively. A one acre (or 0.4 hectare) land would be sufficient for one field demonstration. The field demonstrations should be carried out in a dispersed way and in cultivators own lands with the assurance of certain minimum returns to them. The total number of demonstration to be carried out would be 115, covering an area of 46 hectares (Table - 34).

Table - 34 : Agricultural Inputs Required for HYV Demonstrations

Description	C r o p s			Total
	Paddy	Maize	Wheat	
1. Demonstrations (No.)	75	20	20	115
2. Area covered (Ha.)	30	8	8	46
3. <u>Seed</u>				
3.1 Quantity (Kg.)	540	120	800	1460
3.2 Value (Rs.)	2160	600	2000	4760
4. <u>Fertilizers*</u>				
4.1 Quantity (Kg.)	4800	1280	1280	7360
4.2 Value (Rs.)	13680	3648	3648	20976
5. <u>Pesticides</u>				
5.1 Quantity (Kg.)	1500	600	480	2580
5.2 Value (Rs.)	4125	1650	1320	7095
6. Total Cost of Demonstrations (Rs.) (3.2 + 4.2 + 5.2)	19965	5898	6968	32831
				of Rs.0.33 lakh
7. Subsidy to cultivators(Rs.) @ 33.3% of the cost				10944

* The N:P:K proportions are 2:1:1.

According to the Table - 34, the costs involved in paddy, maize and wheat demonstrations would be Rs.0.20 lakh, Rs.0.06 lakh and Rs.0.07 lakh respectively, adding to Rs.0.33 lakh. Of this total, the shares of seeds, fertilizers and pesticides would respectively be Rs.0.05 lakh, Rs.0.21 lakh and Rs.0.07 lakh over a period of five years. For generating interest among the cultivators to come forward and cooperate in laying out these demonstrations, it is deemed necessary that a part of the seed, fertilizer and pesticide costs be met by the government in the form of subsidy. The subsidy rate is proposed to be 33.3 per cent of the cost, or Rs.0.11 lakh out of the total outlay of Rs.0.33 lakh. The remaining Rs.0.22 lakh would be made available to the cultivators as institutional finance.

5.1.6 Establishment of Mini Agro-Service Centres and Provision of Tractors

The average land holding size in the block is in the vicinity of 2.50 hectares and well over one-third of the cultivators have land above 3 hectares. The typical terrain conditions has rendered agricultural operations, particularly ploughing, difficult. The problem is more revealing because of the very poor draught power of the livestock to be deployed for the purpose and growing disinclination of unskilled labourers in the rural areas for the kinds of jobs that are quite strenuous. Therefore, in order to facilitate the development of agriculture in the area it is proposed to make available tractors to the cultivators on custom hiring basis. The tractors can also be hired out for threshing operations. The suggestive charges for ploughing and threshing operations being carried out with the help of a tractor are Rs.45 per hour and Rs.50

Table - 35 : Equipments to be Provided at the Proposed Mini Agro-Service Centres

Item	(Number)			
	Talbehat	Pura	Kalan	Dhangol Total
1. Tractor	1	1	-	2
2. Alpad Threshers	5	5	5	15
3. Tippera	5	5	5	15
4. Seed-cum-fertiliser drill	5	5	5	15
5. Levelling implements	3	3	3	9
6. Welding machine	1	1	1	3

The capital cost involved in setting up of these agro-service centres would be of the order of Rs.5.09 lakhs, of which about Rs.2.63 lakhs will be required for purchase of tractors, other implements and the necessary set of tools like hammers, anvils, pliers, wrenches etc. The total outlay for establishing these centres is estimated at about Rs.9.03 lakhs including the cost of two tractors as shown in Table - 36.

Table - 36 : Outlay for the proposed Mini-Agro-Service Centres

Item	Cost per centre (Lakh Rs.)	Total Outlay (Lakh Rs.)
1. Land and building	0.82	2.46
2. Implements including tools	0.45	1.35
3. Wages and salaries	0.73	2.19
4. Utilities (Diesel, lubricant, water and electricity)	0.08	0.24
5. Insurance and taxes	0.036	0.108
6. Repairs and maintenance	0.180	0.540
7. Depreciation	0.250	0.750
8. Contingencies	0.036	0.108
Sub-Total	2.582	7.746 or 7.75
Two tractors, one for Talbehat and the other for Pura Kalan		1.28
Total Outlay		9.03

per hour respectively. The charges may be realised on cash basis either at the time of service or at the time of the harvesting, particularly in case of small cultivators.

Apart from tractors, certain other implements, for instance, Alpad thresher, Tiphera, seed-cum-fertilizer drills, levelling implements and welding machines would be required for providing the facility of repairs of the agricultural implements to the farmers and facilitating mechanised operations. It is deemed that mechanisation of agricultural operations would not only increase the productivity of land, but would also help the rural poors to raise their incomes. Three Mini Agro-service centres have therefore been proposed for the plan. Two of them will have tractors also. They will be located at central places on the one hand and suitably dispersed on the other.

The proposed locations for the mini agro-service centres are Talbehat, Pura Kalan and Dhangol. For facilitating the ploughing operations, one tractor will be provided at each of the two centres proposed for Talbehat and Pura Kalan. In Talbehat, which has been identified as growth centre, one more tractor will be available for use partly in the well revitalisation operation and partly for custom hiring. The provision for this well revitalisation unit has been made separately under irrigation.

5.1.7 Establishment of Seed Stores

There are at present only four seed distribution centres in the block, one at the block headquarter and the remaining three in Birdha, Sunaura and Nathi Khera villages. This number is quite inadequate for timely availability of the inputs to the farmers in relatively distant villages. Therefore, with a view to promoting the spread in adoption of the high yielding varieties and intensive cropping, the number of seed distribution centres have to be suitably increased. It is proposed to set up a seed distribution centre in each of the villages Banguan Kalan, Bijrotha, Bhuchera, Dhangol, Sarebans Kalan and Jamalpur. The requirement per seed store is assessed at Rs.70,000. Thus the total outlay for establishment of seed stores in the block is Rs.4.20 lakhs.

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5.2 Horticulture

Under the present ARDC scheme of horticultural development financing, loans are made available to cultivators for fruit plantation. But because of lack of adequate supervision and follow up, the scheme is not bringing commensurate results. Although Talbehat has considerable potential for citrus fruit production, the demand for which have been constantly increasing, any substantial growth of this activity needs special efforts in the background of the existing economic profile of the area. It is therefore proposed to develop lemon orchards in an area of 50 acres, covering 5 acres per village in 10 villages of the block. The tentatively proposed villages are Birdha, Pura Kalan, Mawlain, Bijai Pura, Batwaha, Badora, Jhawar, Jijwara, Karenga and Kandhari Khurd.

In each selected village five acres of waste land will be developed by the Government into plantation land. This activity will be carried out by the Soil Conservation Department. The cost of development of land has been accounted for in the outlay against the head soil conservation. On the developed land in each village, a masonry well will be constructed, one persian wheel will be installed and guls constructed by the minor irrigation department. The outlay for development of irrigation has been included under the head irrigation.

The number of beneficiaries from a selected village will be 5. Each beneficiary will be allotted 1 acre or about 0.4 hectare of land for lemon plantation. The beneficiaries will be identified from amongst the marginal farmers and landless category of workers. The beneficiaries will be provided Rs.21,250 towards meeting the initial cost of plants, fertilizers and pesticides to be used for plantation and development of orchards and purchase of ordinary equipments. Eighty per cent or Rs.17,000 of this cost will be met in the form of long term loan to the beneficiaries and the remaining 20 per cent or Rs.4,250 as subsidy.

The lemon plants will bear fruits after 5 or 6 years of plantation. The orchardists will be pursued and encouraged to carry out inter-cropping of vegetables during this gestation period. For this purpose they will be provided short term loan of Rs.7,500. The maintenance of wells and rahats will be done by the irrigation department during this period. This would cost about Rs.5,000 during the plan period. To realise this amount as well as the cost of construction of wells and installation of persian wheels, the

Government can impose a development levy on the beneficiaries @ Rs.50 per acre, apart from land lease charges @ Rs.10 per acre per annum.

The cost of maintenance of orchards, including plant replacement during the plan period would come to about Rs.500 per acre or Rs.25,000 for the whole project. The cost of marketing of the vegetables produced on the allotted lands is estimated at around Rs.60 per acre per year or Rs.15,000 for the project during the five year period. These costs will be borne by the orchardists from their own surpluses. A detailed proposal of the project 'Feasibility Report of Citrus Fruit Plantation in Talbehat Block, District Lalitpur' has already been submitted earlier to the sponsoring agency.

Apart from the above, it is proposed to bring additional areas of 50 hectares under potato, 25 hectares under ginger and another 50 hectares under other vegetables. This would require short term finance to the cultivators for purchase of inputs to the tune of Rs.4,000. The vegetable growers will be allowed 25 per cent subsidy, amounting to Rs.1,000. The remaining amount of Rs.3,000 will be made available to them as loan.

The outlay shown under the head 'Horticulture' excludes the costs of land development, construction of wells, installation of persian wheels and construction of guls. The total outlay under horticulture works out to Rs.0.78 lakh with shares of State sector, financial institutions and individuals at Rs.0.10 lakh, Rs.0.28 lakh and Rs.0.40 lakh. This includes the outlay for the plantation project feasibility report submitted earlier to the sponsoring agency.

5.3 Irrigation

Masonry well is the main source of irrigation in Talbehat block. According to the estimates given in the district statistical bulletin, Lalitpur 1979, the net area irrigated from wells in the block was 10205 hectares, against the total irrigated area of 10503 hectares from all sources. The total number of masonry wells was reported to be 5345, most of which recorded as fitted with pursian wheels. Discussion with the officials and the cultivators however revealed that not all the masonry wells are working or are working effectively for want of blasting operations. The proportion of such wells is assessed at least five per cent. Spot check up of certain working wells in the area suggested that ordinarily a masonry well fitted with pursian wheel could irrigate to any substance only around 1.5 hectare of land. Taking this as a norm and assuming the number of working wells to be 5078 (95 per cent of the reported number), the net area irrigated from wells in the block is estimated at 7617 hectares. The irrigated area reported against other sources is 299 hectares. Thus the net area irrigated by different sources in the block works out to be 7916 hectares (7617 + 299). The reported total irrigated area of 10503 hectare thus appears to be an overestimate. We therefore adopt the base year net irrigated area at 7916 hectares. The area irrigated more than once, as difference of the reported gross irrigated and net irrigated areas, works out to 739 hectares. The gross irrigated area in the block for the base year has thus been taken to be 8655 hectares.

Adopting the above estimates, the percentage of net irrigated area to net area sown in the block is 51.83 per cent, and that of

gross irrigated area to gross cropped area 35.62 per cent. This suggests that major part of the cropping in the area is carried out on unirrigated lands. Therefore, in order to promote the package of agricultural practices in general and increase the relative coverage of high yielding varieties and commercial crops, substantial expansion in the irrigation facilities is necessary.

It has already been noted earlier that wells are likely to continue as the main source of irrigation because of the remote possibility of public irrigation systems like State tubewells and canals in the near future. The annual recharge of ground water in the area is estimated to be around 9000 hectare meter. Out of this the total draft is about 4000 hectare meters, rendering a balance of the order of 5000 hectare meters. Thus, more than half of the total annual recharge is still available for increasing the irrigation potential in Talbehat block. In other words ground water may continue to be a dependable source of irrigation in the area.

In the above background it is proposed to construct 500 new masonry wells during the plan period, and carry out revitalisation operations on the ceased wells. The proposal for well blasting operations has been made separately in the 'Feasibility Report of Tractor Driven Well Blasting-cum-Custom Hiring Unit in Talbehat Block, District Lalitpur', submitted earlier to the sponsoring agency. The primary function of this unit, proposed to be located at the block headquarter, is to carry out well blasting operations. The total outlay for this unit has been worked out to be Rs.1.93 lakh.

The irrigation potential of the area will be raised, besides the construction and revitalisation of wells, from increasing the use of pursian wheels and pumping sets, desilting and cleaning of tanks and construction of bundhies. It is proposed that all the new masonry wells will be fitted either with pursian wheels or pumping sets. The plan targets and outlay for the minor irrigation works are shown in Table - 37.

Table - 37 : Plan Targets and Outlay for Minor Irrigation Works

Sl. No.	Item	Number	Irrigation Potential (Ha.)	Outlay (Lakh Rs.)
1.	Masonry wells	500	500	45.00
2.	Pursian wheels	500	250	10.00
3.	Pumping sets	200	400	14.00
4.	Construction of bundhies (Ha.)	1200	1200	9.00
5.	Desilting and cleaning of tanks		100	2.00
6.	Well revitalisation unit		1218	1.93
Total			3668	81.93

The private M.I. works would involve an expenditure of Rs.76.90 lakhs. This excludes the cost of construction of 10 masonry wells and 10 pursian wheels for the proposed horticultural project of lemon plantation. The cost of this part of the irrigation will be about Rs.1.10 lakh and will be borne by the Government as envisaged in the proposal. The cost of remaining irrigation works, namely 490 wells, 490 pursian wheels, 200 pumping sets and 1200 ha. of bundhies will be subsidised to the extent of 25 per cent by the Government, with an equal contribution from the beneficiaries. The remaining 50 per cent of the costs will be made available as long term

loan. Thus, of the total requirement for private minor irrigation works of Rs.76.90 lakhs, the subsidy and institutional finance components will be Rs.19.23 lakhs and Rs.38.45 lakhs. The remaining cost of Rs.19.22 lakhs will be met by the individual beneficiaries.

Under the state works, there is possibility of increasing the irrigation potential by desilting and cleaning of tanks. During the plan period it is proposed to create an additional potential of 100 hectare for desilting of tanks, at a cost of about Rs.2.00 lakhs. Apart from that, the additional irrigation potential expected from the operation of the proposed well blasting unit is 1218 hectares. The outlay for this unit is Rs.1.93 lakh. Thus the total irrigation potential to be created during the plan period in the block, taking into account both the private and state minor irrigation works is 3668 hectares. It is expected that 85 per cent of this potential will be effectively utilised towards expansion. This implies an increase of 3118 hectares in the net irrigated area.

The total outlay for the irrigation development for the plan period comes to Rs.81.93 lakhs. Out of this the Government will incur an expenditure of Rs.24.26 lakhs, Rs.38.45 lakhs will be made available to the beneficiaries as loan and Rs.19.22 lakhs will be borne by the individuals from their own sources. The details are given in Annexure - 4.

With the proposed increase in the irrigation potential the proportions of irrigated area under important crops will rise. It is expected that by the terminal year of the five year plan, the percentages of irrigated areas under paddy, maize, wheat, barley and gram would be about 19.0, 14.3, 99.6, 97.9 and 81.3 respectively (Table - 38).

Table - 38 : Irrigated Area Under Important Crops by the Terminal Year of the Plan

Crops	Total Area (Ha.)	Irrigated Area	
		Hectare	% to Total
1. Paddy (Total)	4214	800	18.98
1.1 Kharif	3814	400	10.49
1.2 Zaid	400	400	100.00
2. Maize (Total)	4196	600	14.30
2.1 Kharif	3896	300	7.70
2.2 Zaid	300	300	100.00
3. Wheat	10040	10000	99.60
4. Barley	1940	1900	97.94
5. Gram	1046	850	81.26
6. Pea	140	100	71.43
7. Masur	785	700	89.17
8. Sugarcane	86	86	100.00
9. Potato	76	76	100.00
10. Ginger and other vegetables	75	75	100.00

5.4 Soil Conservation

Soil conservation measures are very much needed in Talbehat area particularly in view of the facts that moisture retention capacity of the soil is very low and also that during rains the productive soil content in the top layer continues to be washed away. Towards raising the land productivity, it is proposed to carry out soil conservation measures in at least 5 per cent of the existing land under agriculture. The net area sown in the base year is 15272 hectares. The target for soil conservation on the existing land under agricultural use is therefore proposed to be 768 hectares during the plan period. This work would primarily involve moderate levelling and bunding, along with construction of water outlets (spillways).

Apart from the above, soil work would also be necessary to bring addition land area of 2592 hectares under cultivation. This would involve relatively greater amount of soil work, particularly in levelling, and extra work of deep ploughing. The total area on which the soil conservation measures are proposed to be carried out during the plan period is thus 3360 hectares.

The soil conservation work will be carried out as State work. So far as the cost of work on in-cultivation lands is concerned, it would amount to Rs.9.22 lakhs @ Rs.1200 per hectare. This expenditure should be shared by the owner cultivators. The beneficiaries of this scheme would be small and marginal farmers who constitute the majority. It is suggested that 50 per cent of this cost should be met by the State as subsidy to the beneficiaries and the remaining amount should be realised from them. This order of subsidy is recommended in the existing socio-economic background of the area and the need for popularising the programme.

The cost of treatment of the waste lands is estimated at Rs.1500 per hectare or a total of Rs.38.88 lakhs. This cost will be fully borne by the Government. The total outlay of the soil conservation programme is thus Rs.48.10 lakhs, out of which Rs.43.49 lakhs will be shared by the State sector and Rs.4.61 lakhs will be contributed by the individuals.

5.5 Animal Husbandry

The livestock, particularly cattle and buffaloes, which constitutes the major part of the productive assets other than land in rural areas, is generally of very poor quality in terms of body weight, draught power and milk yield. The per day milk yields of

the local cows and buffaloes are assessed at around 0.5 litres and 1.5 litres per animal during the milching period. The climatic conditions are mainly responsible for this state of affairs. Sowing of fodder is very rare among the cultivators or breeders, who therefore leave the animals astray to feed themselves during summer season. Because of adverse climatic conditions and scarcity of green fodder in the area, the improved cattle imported from outside do not retain health and milk yield rates. This has constrained the improvement of the local breeds of cattle and buffaloes. Moreover, under-feeding of the animals coupled with lack of health cover are extra problems in the development of the livestock. The local variety of goats are however better and therefore goat rearing is an important occupation particularly among the poorer sections. Poultry programme may also gain grounds in the area, particularly in villages connected by pucca roads. But in spite of the poor quality of animals the potential for development of animal industry has however not to be undermined since it is a major activity in rural areas on the one hand and has strong bias in favour of the small farmers and the landless unskilled workers. The programme proposals for development of the animal husbandry activity are described below.

5.5.1 Distribution of Milch Cattle

It is proposed to distribute 400 cows and 400 buffaloes of local improved breed to the small farmers and landless labourers towards providing them employment and income opportunities. As said earlier, the imported breeds of the animals do not generally sustain the climate of the area. The suitable breeds identified for distribution in the block are 'Tharparkar' cows and 'Bhadwari' buffaloes.

The cost of a cow would be around Rs.2000 and that of a buffalo Rs.2800. The total outlay for distribution of milch cattle would be Rs.19.20 lakhs for the plan period. Of this outlay, one-third or Rs.6.40 lakhs will be met by the Government as subsidy to the beneficiaries and the remaining Rs.12.80 lakhs will be provided to them as loan.

5.5.2 Goat Rearing Programme

Goat rearing, which is a conducive activity for the area and likely to benefit the labourers in particular, will be geared up by distributing 900 goats in twenty villages of the block. The proposal for the goat rearing scheme has been submitted earlier ('Feasibility Report of Goat Rearing in Talbehat Block, District Lalitpur') to the sponsoring agency. This project is conceived for an outlay of Rs.3.69 lakhs of which Rs.1.89 lakhs will be spent by the Government as subsidy (Rs.1.80 lakhs) to the beneficiaries and cost of bucks (Rs.0.09 lakh) for breeding purpose. The remaining Rs.1.80 lakhs of the outlay will be made available to the beneficiaries as loan.

5.5.3 Poultry Development

Talbehat, being a growing market centre, situated on a National Highway and being a military headquarter is well suited for development of poultry in the surrounding villages. The demand for eggs in Talbehat is enough to sustain the development of poultry over a sufficiently long period of time. The object of the poultry programme in the area would be to initiate and encourage poultry farming on commercial lines. For the five year plan period it is proposed to set up 10 poultry farms of 100 birds each - three in the village

Khandi, three in Karesra Kalan, two in Bamori Sar and two farms in Chandrapur. All these villages are connected by pucca road and situated around Talbehat, where veterinary facilities are available.

For the poultry programme, 115 day-old female chicks will be distributed per beneficiary. It is assessed that 100 birds, out of the total 115 will survive to be developed into quality layers. Deep litter system is recommended for rearing of the birds because of relatively high incidence of infection and diseases in the area. For each farm a shed, about 200 sq. ft. in area, would be required and can be constructed by partly using local material. Besides, certain ordinary equipments like feeders, waterers, egg laying boxes and trays will be required. It is estimated that construction of poultry shed and purchase of necessary equipments would involve an expenditure of Rs.3,100 per unit. The costs of 115 chicks and their maintenance during the first six months of their growth as layers would be about Rs.2200. The total outlay for setting up of a poultry unit would thus be Rs.5,300, and that for all the ten proposed farms Rs.0.53 lakh. Out of this outlay the cost of chick and their maintenance for the initial six months would be about Rs.0.22 lakh, which will be borne by the beneficiaries. Of the total capital cost, i.e. the remaining Rs.0.31 lakh, 25 per cent or about Rs.0.08 lakh will be spent by the Government as subsidy to the beneficiaries, and Rs.0.23 will be financed to them as loan.

5.5.4 Veterinary Centres

The veterinary facilities in the block are quite 'inadequate to catering to the requirements of the local breeders and have therefore to be provided at central places in the block area. At present

there are only three stockman centres in the Terai, Banguan Kalan and Bhuchera villages and a veterinary hospital in Talbehat. It is proposed to establish four stockman centres during the plan period. These centres are proposed to be located at Birdha, Bijrotha, Dhangol and Jamalpur. All these stockman centres should have the artificial insemination facility to the level of A.I. Sub-centres. The financial requirement for establishing one stockman centre is estimated at Rs.50,000 and that per A.I. Sub-centre an additional Rs.35,000. The total outlay for the said veterinary centres would thus be Rs.3.40 lakhs.

5.5.5 Fodder Development

The cattle development programme has necessarily to take into account the availability of fodders, which is very much scarce in the area. Because of the physical conditions and the poor agrarian profile, the fodder development in Talbehat block can be visualised only with special incentives to the cultivators, and that too at a relatively low pace. It may be pointed out here that the Grassland and Fodder Research Institute, Jhansi has been engaged in developing such varieties of nutritive fodder as could sustain the dry climatic conditions of the region. But since nothing practical appears to have come out, it is proposed to initiate fodder cropping in 15 hectares on an experimental basis. The total coverage by crops will be : Berseem 8 ha., Oat 3 ha. and M.P. Chari 4 ha.

The seed requirements for fodder cropping are estimated at 25 kg. per hectare @ Rs.7.00 per kg. of Berseem, 40 kg. per hectare @ Rs.2.50 per kg. of Oat and 40 kg. per hectare @ Rs.3.50 per kg. of M.P. Chari. The total outlay for fodder development thus works

to Rs.2260 or about Rs.0.02 lakh. This amount will be borne fully by the Government.

5.6 Fishery Development

Uptil now the fisheries programme has been run in the region mainly on State reservoirs. Fortunately there are quite a few tanks in the block which can be renovated and be used for development of fisheries. This activity has special significance towards improving the economic condition of the poorer groups. The fishery development may be suitably conceived in the cooperative fold. However, since no concerted efforts were made for pisciculture development in the area, the initial targets may be kept on a lower side. It is therefore proposed to organise two fishermen's cooperative societies in the villages Khandi and Pura Kalan or in adjoining villages. The fishermen's cooperatives would carry out the tasks of deepening and cleaning of ponds, stocking of fingerlings and netting out the fish.

The programme is to be carried out on about 10 hectares of water area. The cost involvements would be : deepening and cleaning of ponds @ Rs.7,000 per hectare or Rs.70,000; purchase of boats, nets etc. @ Rs.3,000 per society or Rs.6,000; and stocking of fingerlings, transportation and marketing @ Rs.16,000 per society or Rs.32,000. The total outlay for the fisheries programme would thus be of the order of Rs.1.08 lakhs. Of this requirement, one-third or Rs.0.36 lakh will be met by the Government as subsidy and the remaining Rs.0.72 lakh will be arranged from the cooperative sector.

5.7 Cooperatives

During the recent past the cultivators, particularly those in the villages on the periphery of the Talbehat town, have shown growing

interest in cultivation of potato and green vegetables. Cultivation of ginger has also come up, recently. Citrus fruit production is another speciality of the area. Encouragement to such activities can be made by providing cold storage facility, so that the cultivators may get appropriate price for their produce. It is therefore proposed to establish a cold storage in Talbehat. This cold storage would be in the cooperative sector and would cost about Rs.5.0 lakhs.

5.8 Development of Industries

Talbehat has been declared as an industrial growth centre by the Government. An Assistant Manager under the DIC Lalitpur has also been posted at the block headquarter to facilitate and coordinate the growth of industrial activity within a radius of 8 kms. of Talbehat township. Talbehat town area has also been considered at par with rural areas for the purpose of setting up industrial units. But because of lack of infrastructural facilities on the one hand and lack of concerted efforts on the other, the industrial development programme could not show any considerable impact. The industrial activities proposed for the area are described below. The proposals for infrastructural facilities have been made subsequently.

5.8.1 Small Scale Industries

It is proposed to establish 16 small scale industrial units in the block area, involving a total investment of Rs.28.34 lakhs. The locations and investment required for individual categories of units are shown in Table - 39.

Table - 39 : Proposed Small Scale Industrial Units and Their Locations

Sl. No.	Name of Units	No. of Units	Location	Total Investment (Lakh Rs.)
1.	Paddy Processing	1	Talbehat	3.89
2.	Stone Crushing	1	Bijrotha	4.56
3.	Match box cottage unit	1	Talbehat	0.59
4.	Saw Milling	3	Pura Kalan, Sarebans Kalan, Jamalpur	5.55
5.	Wooden Furniture	3	Pura Kalan, Sarebans Kalan, Jamalpur	3.75
6.	Agricultural Implements	2	Bhuchera, Jamalpur	2.20
7.	Electroplating	1	Talbehat	2.50
8.	Steel Furniture	2	Talbehat, Jamalpur	3.00
9.	Spice Grinding	1	Talbehat	1.10
10.	Lens Grinding	1	Talbehat	1.20
Total		16		28.34

Of the industrial units proposed in the above mentioned table, project feasibility reports for three units, namely paddy processing, stone crushing and match box cottage unit have been submitted separately to the sponsoring agency. These units will be located in Talbehat and Bijrotha village. The location-wise distribution of industrial units is : Talbehat 6, Jamalpur 4, Pura Kalan 2, Sarebans Kalan 2, Bijrotha 1 and Bhuchera 1. For small scale industries an out-right subsidy @ 15 per cent of the capital cost is available to the entrepreneurs from the Government of India under the RIP.

Other incentives that are available for industrial development in the area are concessional financing by IDBI, IFC and UPFC, exemption from excise, power subsidy, supply of scarce raw material on a priority

basis, interest free loan from PIICUP and subsidy on travelling to the extent of 25 per cent. Yet there is need to minimise the procedural bottlenecks and wastage of time through streamlining the working of the District Industries Centre, Lalitpur and its sub-unit at Talbehat towards success of the industrial development programme.

The total investment required for the proposed 16 small scale units would be of the order of Rs.28.34 lakhs, of which the fixed capital requirement would be worth Rs.13.90 lakhs. Of this fixed capital requirement, Rs.2.09 lakhs will be met as outright subsidy on capital from the Government, Rs.8.27 lakhs as long term loans for fixed capital assets as institutional finance and Rs.3.54 lakhs will be invested by the entrepreneurs from their own resources towards meeting the fixed capital requirements. Besides, the entrepreneurs will have to invest about Rs.0.50 lakh towards mortgage and other related expenses. The working capital requirement for the units would be to the tune of Rs.13.94 lakhs which will come from financial institutions as short term loan. Thus the financial breakups of the total outlay of Rs.28.34 lakhs are : State Sector Rs.2.09 lakhs, Institutional Finance Rs.22.21 lakhs and Public Contribution Rs.4.04 lakhs.

5.8.2 Khadi and Village Industries

The khadi and village industries have to play a vital role in providing employment opportunities to the un/underemployed on the one hand and ensuring easier availability of consumer goods to the people on the other. The village industrial units are proposed as per Table - 40.

Table - 40 : Proposed Khadi and Village Industrial Units and Their Locations

Sl. No.	Name of Units	Number	Location
1.	Soap making	2	Birdha, Pura Kalan
2.	Carpentry	2	Birdha, Bhuchera
3.	Shoe making	3	Birdha, Bhuchera and Dhangol
4.	Black Smithy	3	Birdha, Bijrotha, Sarebans Kalan
5.	Roofing Tiles	3	Birdha, Pura Kalan, Jamalpur

The total number of proposed Khadi and Village Industrial units for the plan period is 13. The Uttar Pradesh Khadi Gramodyog Board will finance these industries as also provide guidance to entrepreneurs and facilitate their setting up through the Gramodyog Adhikari, posted at the district headquarter.

5.9 Road Construction

Road infrastructure is a pre-condition for the spread of the development streams down to remote areas and pushing up the levels of activity and the overall pace of growth of the economy. There has however been no area specific planning of roads. Although it is desirable that all the villages should be connected by pucca road, the existing situation does not permit for such a comprehensive road plan because of the resource constraints.

About the existing road profile in the block, it was gathered that some of the roads taken up under the Food For Work Programme were left after soil-working. Taking into view the stock of roads, we find missing links between one patch of road and a pucca road or between a central village and the surrounding villages. Not all

the central villages have pucca road links. And, finally, the concentration of the roads varies markedly among different sub-areas of the block. The rationale of making the proposal of road programme is therefore based on the need of making available pucca road (or kankar road) links to all the identified central places, to bridge up to the possible extent the missing road links from the nearby pucca road and ensure easy accessibility of the people, living in remote areas, to the central places. The total length of roads to be constructed during the plan period is proposed to be 38 kms. The length-wise break-ups of different roads are shown in Table - 41.

Table - 41 : Proposed Roads for the Plan

Road Connections	Length in Kms.
1. Terai - Dhamakna - Daulta - Bijrotha	6
2. Dhangol - Chungi - Mawlain	4
3. Geora Gundera - Ugarpur upto metalled road	5
4. Banguan - Gugar	2
5. Birdha - Kandhari Khurd	3
6. Bamori Sar - Sunori	6
7. Mawlain - Rampura Kathbar	4
8. Sunori - Piprai	5
9. Khandi - Pawa - Birdha	3
Total	38

The construction of the proposed roads was taken up earlier under the Food for Work Programme, but for want of resources most of them were left uncared after soil working. With the passage of time this road stock also got deteriorated. However to make them good for use, they have to be surfaced. It is proposed to shape them as kankar roads. This will involve soil working, soling etc.

and crushing. It is estimated that on an average the cost of these roads would be about Rs.0.50 lakh per kilometer, or Rs.19.00 lakhs for the total proposed road length.

5.10 Power

The process of electrification of villages in the block has been slow, so that upto now only six out of 102 villages are electrified. These villages are Khandi, Bangawan Kalan, Sarebans Kalan, Karesra Kalan, Terai and Jamalpur. Village electrification has therefore to be taken up at a faster pace to serve as production infrastructure as also a consumer item. It is therefore proposed to cover about one-fifth of the total number of villages during the plan period under the rural electrification programme. The rationale of selecting the villages for electrification is as stated below.

It may be noticed that out of the nine central places (Chapter 4) only four are electrified. The remaining five, namely Pura Kalan (service centre), Birdha, Bhuchera, Dhangol and Bijrotha will be electrified during the plan period. Apart from that, relatively large sized villages, which are expected to fall along, or at short distances from, power lines to connect the central places will also be electrified. Tentatively, the power lines can be extended from Talbehat to Birdha, Birdha to Ugarpur and Kandhari Kalan, Birdha to Nathi Khera and Pura Kalan, Terai to Bijrotha, Sarebans Kalan to Bhuchera and Bijaipura, Bhuchera to Dhangol, Bangawan Kalan to Cagar and Bijrotha to Myawe. It is however not possible to provide a lay out plan for the power lines. The villages proposed to be electrified during the plan period are : Birdha, Pura Kalan, Pawa, Geora Gundera, Ugarpur, Kandhari Kalan, Hasar Kalan, Rampur, Sunaura,

Bhuchera, Sunori, Bijaipura, Baghora, Rampur Kathbar, Dhangol, Bijrotha, Myawe (Meau), Gugar, Kakrari and Dhamakna.

The total number of villages proposed for electrification during the plan period is 20. The total length of HT/LT lines may be in the vicinity of 50 kms. Taking the average cost of power supply extension @ Rs.40,000 per km. the outlay will be Rs.20.00 lakhs.

5.11 Education

There are 79 junior basic schools, 14 senior basic schools and one higher secondary school in the block. While all the identified central places of the area have both primary and upper primary education facility, the higher secondary school is located in Talbehat proper. The number of villages not having junior basic schools is 35 and that not having senior basic schools 91. Quite a few of these villages are relatively small in terms of population size. But at the same time the villages Kalothra and Hansar Kalan, each of which has a population of over 500, do not have primary schools. Similarly, among the villages having population of above 1500 and not having senior basic schools are Khandi, Pawa, Bijaipura and Sunori. It is therefore proposed to set up two junior basic schools, one each in Kalothra and Hansar Kalan and four senior basic schools in the subsequently mentioned four villages with population over 1500.

Looking at the location of the existing one higher secondary school, which is Talbehat, it is observed that this school is quite far from the chunk of villages, particularly in the eastern half of the block area. From this point of view and otherwise too the higher

secondary schooling facility is inadequate in the block. It is therefore proposed one higher secondary school in the village Pura Kalan, which has been identified as a 'service centre'.

The total number of schools proposed to be set up in the block during the plan period is 8, comprising 2 junior basic schools, 4 senior basic schools, 1 higher secondary school and ^{one degree college.} The outlays per junior basic, senior basic and higher secondary schools have been taken to be Rs.0.40 lakh, Rs.1.37 lakh, Rs.4.00 lakhs and Rs.18 lakhs. The total outlay for the education sector is thus Rs.28.28 lakhs.

5.12 Medical and Health

The medical and health facilities are acutely lacking in the block. There are 6 dispensaries, 5 maternity and child welfare centres, 6 family welfare centres and one primary health centre in the block, including the urban area accounting for one unit each. Most of the villages are thus devoid of these facilities. Even from amongst the central places, only Talbehat, Pura Kalan, Birdha and Jamalpur have both dispensaries and maternity and child welfare centres. The central village Bangawan Kalan does not have a MCW centre while there is no dispensary in or at a short distance from the village Bijrotha. The remaining three central villages, namely Bhuchera, Sarebans Kalan and Dhangol have neither of these two 'lower order' facilities. It is therefore proposed to establish maternity and child welfare centres at Bangawan Kalan, Bhuchera, Sarebans Kalan and Dhangol and a dispensary at each of the places Bijrotha, Bhuchera, Sarebans Kalan and Dhangol.

Primary health centre, a 'middle' order facility is also missing the identified (Potential) service centre Pura Kalan. However,

the existing one primary health centre seems to be sufficient. No proposal is therefore being made for another primary health centre in the block. But over a period of time, may be beyond the perspective of the present five year period of reference, another primary health centre would be required to be set up at Pura Kalan.

The physical targets for the plan period in terms of the number of units are thus : Maternity and Child Welfare Centres 4 and Dispensaries 4. Taking the cost of setting up a MCW Centre at Rs.0.80 lakh and that of an allopathic dispensary at Rs.2.00 lakhs, the total outlay for this sector works out to Rs.11.2 lakhs.

5.12 Drinking Water

According to the available statistics, 27 inhabited villages of the block do not have adequate availability of drinking water throughout the year. Of these 22 villages do have drinking water wells but then water is scarcely available during summer season. The remaining wells do not have drinking water wells at all. The information available from the BDO however suggests that the number of populated villages not having drinking water wells in the year 1978-79 was 17, which differs from the information given in the District Statistical Bulletin Lalitpur, 1979. The data published in the Bulletin has however been taken as correct.

In certain areas of the district the Uttar Pradesh Jal Nigam has launched their scheme of piped water supply. Talbehat block has not so far been brought under this scheme. The other scheme of drinking water is that of construction of Harijan wells under the Community Development Programme. These wells are constructed in the Harijan settlements. But since drink water is a very basic necessity,

it has to be ensured that every village has sufficient availability of water throughout the year. The creation of drinking water facility would involve construction of new wells as well as revitalisation of old wells wherever it is required and possible. From among 27 villages where water is scarce during summer, the number of new wells to be constructed during the plan period would be 15, and revitalisation operation will be rendered on 12 wells. Besides, in each of the villages having no wells, one well will be constructed. Thus the total number of wells to be constructed during the plan period is 20 and that to be revitalised 12. The average cost per well construction including blasting operations would be around Rs.9,000 and that of revitalisation per well Rs.300. The total outlay for drinking water would be Rs.1.84 lakh.

CHAPTER 6

Plan Implementation

In a tradition bound society and somewhat stagnant rural economy like ours, planned development is necessary towards setting in autonomous changes in the desired direction. The cost of bringing in such changes is associated with the extent to which the plans are realistic and conducive to the given socio-economic and resource base. Successful implementation of plans can not therefore be visualised independently of the quality of planning. But then it should be reckoned that the task of implementation is not so simple and straight-forward as of ensuring fulfilment of certain targets. In fact, the responsibility of providing a lead to the process of development is to be shared equally by the implementing agency, who should be aware that a socio-economic development plan cannot provide perfect guidelines for developmental activities; the reasons are obvious, such as data gaps, time and resource constraints and, above all, the probabilistic nature of the forests. One cannot exactly know as to how the private sector, which is engaged in production, would respond to creation of certain infrastructural facilities, regulations made or incentives provided by the government. The implementation agency should therefore be more concerned with fostering the process of development rather than being rigid about the targets and guidelines provided by the plan.

Here, we may refer to the six project feasibility reports, submitted earlier to the sponsoring agency and integrated with this plan. The project studies are 'revitalisation of wells' in the irrigation sector, 'goat rearing' in the animal husbandry sector, 'citrus fruit plantation' in the horticulture sector, 'paddy pro-

cessing' and 'match box production' as agriculture and forest based industrial activity, and 'stone crushing' as mineral based industrial unit. Each of these study reports gives, to the extent possible, necessary details for the guidance of the implementation agency. But the implementation agency has not to be very rigid about, say, the amount to be realised as blasting charges, or having exactly the same specification of machinery and equipments for which high technical standards are not required, or making available only those facilities to entrepreneurs as are mentioned in the feasibility reports and deny others that could otherwise be available additionally (such as subsidy on interest, subsidy on power and subsidy on travelling expenses), or about the organisation as stated in the feasibility study reports. The flexibilities are in fact essential for efficient implementation particularly because of an inevitable time lag between plan formulation and implementation and possible differences among the options perceived by the planner and actually offered by the entrepreneurs and beneficiaries. To that extent the implementation agency may suitably amend the programme contents.

As regards the indicative plan, the implementing agency may take note of the directions in which the changes are desirable as indicated by the document, and try as far as possible to adhere to the targets. It may be pointed out here that fulfilment of certain targets like distribution of cattle and buffaloes, distribution of goats, and setting up of poultry units may be attempted cautiously, ensuring minimum possible wastage of resources. This implies not only proper utilisation of resources for specified purposes but also ensuring their availment by the intended beneficiaries. Typically, it is learnt that certain targets like distribution of poultry birds and

plantation of orchards have often been met by developing personal contacts with relatively better off people, such as military personnel in the area, which do not comprise the target group or the society which really needs assistance of that sort. This observation needs to be confirmed. Yet, in case such leakages take place at the cost of the target groups, it implies wastage and should be checked. A preliminary step towards ensuring flow of resources to the intended beneficiaries would be to maintain appropriate records, which should be checked as also verified with the help of field inspections by the supervisory staff.

The implementation agency must also bear in mind that in the existing socio-economic and cultural background, there is every possibility of a sizeable waste of resources made available to individuals as financial assistance to them for carrying out economic activities, unless appropriate checks are deployed. The existing institutional arrangement for ensuring proper utilisation of financial assistance, whether rendered to beneficiaries in cash or kind, appear to be adequate for the purpose if followed in the right earnest. However if the implementing agency feels the need for amending certain rules and procedures, it should be brought to the notice of the authorities for immediate action.

One of the pre-requisites of successful implementation is appropriate programming of activities in the given institutional framework. This involves sequencing of the developmental activities and carrying them out at minimum cost and requires, besides initial setting of the system in operation, continuous feed back from the field. Proper maintenance of records and regular field visits are therefore essential. Apart from that, the problems faced by the

village level workers and other officials should brought up and discussed in the monthly meetings at the block and the district levels, towards solving them. This process can be set in meaningfully if every official submits his field notes regularly well in advance of a meeting. These notes should be duly considered and useful points may be incorporated in the agenda for discussions and for further action.

So far as maintenance of records relating to the progress of various programmes, it is possible to distinguish between such achievements as coverage of soil conservation which directly indicate physical progress and certain others like distribution of fodder seed or fruit plants which have only a probabilistic relationship with physical progress. There should be an effective system to examine whether certain reported achievements, like areas under vegetables and plantations, that are often based on certain norms, are realistic. The implementation agency should be careful about recording such progress as could have little or no relationship with the real process of development.

Finally, for efficient implementation concurrent reviews, evaluation and monitoring of the programmes are necessary. Given the present ^{organisational} set up, these responsibility may also be borne by the implementation agency.

CHAPTER 7

Financial Implications of the Plan

The development programmes proposed for the initial five year plan period have been described for different sectors of the economy in Chapter 5. Along with each programme, the financial implications have also been stated. The financial requirements for the activities and programmes have to be met from three sources, namely state sector, financial institution and public (or individual) contribution. The state finances would be required for development of basic infrastructural facilities and for subsidising the input costs of activities intended to be carried out in the private sector. The institutional finance is to cover the investment requirement to the extent it is not subsidised by the Government and cannot be borne by the individual entrepreneurs. This comprises the loan component of the investment requirement, to be catered to by banks and other financial institutions. In special cases, the Government may also provide loans to individual beneficiaries. The remaining part of the requirement is expected to be borne by the individuals. This chapter summarises the sectoral outlays for the five year plan along with their break ups against state sector, institutional finance and public contribution. The total outlay for the plan works out to Rs.322.19 lakhs of which 58 per cent, 31 per cent and 11 per cent will be shared respectively by the Government, financial institutions and the individuals. The sectoral break-ups are shown in Table 42. This outlay includes the requirements all the six projects, submitted to the sponsoring agency earlier.

Table - 42 : Sectoral Outlays for the Proposed Programmes
(Summary)

(Lakh Rs.)

Sector	S o u r c e			Total
	State Sector	Financial Institution	Individual Contribution	
1. Agricultur	25.42	24.16	0.22	49.80
2. Horticulture	0.10	0.28	0.40	0.78
3. Irrigation	24.26	38.45	19.22	81.93
4. Soil Conservation	43.49	-	4.61	48.10
5. Animal Husbandry	11.79	14.83	0.22	26.84
6. Fisheries	0.36	-	0.72	1.08
7. Cooperatives	-	-	5.00	5.00
8. Industries	2.09	22.21	4.04	28.34
9. Road	19.00	-	-	19.00
10. Electric Power	20.00	-	-	20.00
11. Education	28.28	-	-	28.28
12. Medical & Health	11.20	-	-	11.20
13. Drinking Water	1.84	-	-	1.84
Total	187.83	99.93	34.43	322.19
Percentage to Grand Total	58.30	31.02	10.68	100.00

The scheme-wise break-ups of the sectoral outlays shown in the above table are placed at Annexure - 4.

CHAPTER 8

The Organisational Set-up

This chapter tries to make certain suggestions for improving the performance of the block level organisation in carrying out the task of development, in the background of the existing staffing pattern and functions performed by them. The organisation at the block level is headed by the BDO, who with the assistance of the ADOs from different development departments and posted under his charge, is essentially engaged in implementing various development programmes. The usual practice is that plan targets are communicated to the BDO from the district level authorities. Collection of statistics and maintenance of records for the block area is also the responsibility of the BDO, for which one ADO (Statistics) has been posed. The actual strength of various categories of staff obtaining at three points of time in the block is shown in Table - 43.

Table - 43 : Staffing Pattern in the Block Level Set-up
(Number)

Designation	1970-71	1974-75	1978-79
1. BDO	1	1	1
2. VLW	8	9	10
3. Panchayat Sewak (Mantri)	7	7	8
4. Gram Sevika	-	-	-
5. ADO (MI)	-	-	1
6. Boring Mechanic	-	-	-
7. Assistant Boring Mechanic	-	-	-
8. ADO (Ag.)	1	-	1
9. ADO (AH)	-	-	-
10. VAS	1	1	1
11. ADO (Fisheries)	-	-	-
12. ADO (Coop.)	-	1	1
13. ADO (Panchayat)	1	1	1
14. ADO (Industries)	-	-	-
15. ADO (Women)	-	-	-
16. Overseer	1	-	-
17. ADO (Stat.)	-	1	1
18. Medical Officer	1	2	2
19. Ayurvedic Chikitsak	-	1	2
20. Unani Chikitsak	-	-	-

Table - 43 (contd.)

Designation	1970-71	1974-75	1978-79
21. Sanitary Health Inspector	1	-	1
22. Compounder Jan Swasthya	1	-	1
23. Stockman/Compounder	4	4	5
24. Lady Health Visitor	1	1	2
25. Nurse	-	-	-
26. Mid-wife	4	2	4
27. Block Extension Educator	1	1	1
28. Family Planning Health Assistant	4	3	3
29. Basic Health Worker	4	-	9
30. Family Welfare Worker	1	4	4
31. Laboratory Technician	-	-	1
32. Jeep Driver and Others	1	2	6

It is seen that over a period of 1970-79, the number of VLWs has increased from 8 to 10, Panchayat Sewaks from 7 to 8, stockman/compounder from 4 to 5 and Family Welfare Worker from 1 to 4. The maximum increase is however found in case of jeep drivers and other manual staff.

The number of VLWs, who are the basic workers, appears to be sufficient in the block since one VLW has to cater to an average of 10 villages. It is however felt that now the block level organisation is serving more as a supply organisation, so that their association with the field is gradually reducing. Field contacts are, however, necessary not only for successful implementation but also for maintaining upto date knowledge about the problems of the people. Efforts should therefore be made to ensure that every village of the block should be visited by the official(s) at least once a month. They should regularly take note of the problems and prospects of development in each village, provide necessary guidance and help to the people, and try to solve their genuine problems.

It is suggested that an official who visits the field, should prepare field notes and submit to his officer-in-charge. These notes may be considered and the developmental problems emerging out of them may be discussed, for finding remedial ways and means, in the monthly meetings of the development staff.

The performance of the block level officials is judged on the progress reports which show the extent of fulfilment of plan targets. The achievements shown against certain targets, such as distribution of seed, fertilizer, plants and animals, do not necessarily indicate physical progress in terms of effective coverage of the programmes. It is therefore necessary to have regular feed back from the field through evaluation studies. The existing evaluation organisation in the State is however handicapped to accomplish this task at an operationally meaningful scale. Mention may also be made here that the BDO has to ensure timely supplies of inputs like seeds, fertilizer and pesticides. Step for procurement of these material should therefore be taken well in advance. In this background it is proposed to set up an evaluation and monitoring cell at the district level. This cell may review and evaluate the various development programmes being varried out in different blocks of the district, and suggest remedial measures which can be discussed at district level meetings and be finalised with the concurrence of the District Magistrate and if necessary through the Government. To coordinate the task of evaluation and monitoring an official of the rank of ADO may be posted at the block.

The above observations relate to the block level organisation mainly as the implementation agency. However, since block level

planning has to continue as a regular feature, the BDO in consultation with his colleagues can best evolve area specific development plans, provided he has the aptitude and is encouraged in this direction. The BDO should therefore be imparted basic training in planning techniques and should be assigned the task of preparing integrated area development plans for the block. This would imply greater responsibility and more skilled performance on the part of the BDO. It is therefore further suggested that the status of the BDO should be raised to the level of full-fledged class II officer.

Lastly, it is learnt that posting in backward areas is considered by the BDOs and most of the staff in the field, as a sort of punishment. As a result their interest in work gets reduced. On the contrary, more concerted efforts are required for development of backward areas. It is therefore suggested that the BDO and his staff posted in a backward block should be provided with some incentive, may be in the form of a backward area allowance, towards interesting them and making them more committed to the task of development.

Annexure 1

Functions and Facilities by Hierarchy Groups and Their
Total Numbers in Talbehat Block (Based on the Information
Provided by the VLWs for Current Year)

Sl. Order/Name of Functions No.	No. in the Block	Sl. Order/Name of Funct- No. ions	No. in the Block
LOWER ORDER			
1. Primary school	79	25. Railway station	3
2. Post Office	21	26. Hospital	1
3. Private medical practitioner	19	27. Fertilizer and pesti- cides distribution centre	7
4. Electricity	7	28. Cooperative bank	1
5. Multi-purpose cooperative societies	9	29. Police station	1
6. Pucca road	29	30. Post Office with telephone	4
7. Controlled cloth shop	6		
8. Junior high school	14	HIGHER ORDER	
9. Bi-weekly market	9	31. Telegraph office	1
10. Seed distribution centre	4	32. Cold storage	-
11. Stockman centre	3	33. Regulated market	1
12. A.I. sub-centre	3	34. Cinema hall	1
13. Bus stop	12	35. Degree college	-
14. MCW centre	5		
15. Dispensary	6		
16. Police outpost	4		
17. Chemist and druggist shop	2		
MIDDLE ORDER			
18. Agricultural implements repairing shop	3		
19. Veterinary hospital	1		
20. A.I. Centre	1		
21. Higher secondary school	1		
22. Commercial bank	2		
23. Family welfare centre	6		
24. Primary health centre	1		

Annexure 2

Existing and Proposed Functions/Facilities in Different Villages/Urban Settlement

Sl. No.	Name of Village	Location code as per 1971 Census	Existing Functions (Code)*	Proposed Functions (Code)*
1	2	3	4	5
1.	Sarebans Kalan	57	1 2 3 4 5 6 8 9 13 27	7 10 14 15 16 17
2.	Asaupura	53	1 6	
3.	Bari Kalan	50	1	
4.	Bari Khurd	48		
5.	Dhamakna	55	1	4
6.	Jamalpur	51	1 2 3 4 6 8 9 13 14 15 23	5 7 10 11 12 16 17
7.	Terai	56	1 4 6 11 12	
8.	Tenta	52	1 6	
9.	Hansari	54		
10.	Kalothara	49		1
11.	Kakrari	94	1 2 6 13	4
12.	Banguan Kalan	86	1 2 3 4 5 6 7 8 11 12 13 15 16 27	9 10 11 12 14 17
13.	Thana	83	1	
14.	Bigari	84	1	
15.	Gugar	87	1	4
16.	Rajawan	89	1 2	
17.	Bhadauna	80	1	
18.	Mau	88	1 2	
19.	Muktaura	91	1	
20.	Sahsa	92		
21.	Sasuti	93		
22.	Badora	90		
23.	Dhangol	38	1 2 5 7 8 9	3 4 6 10 11 12 13 14 15 16 17 36
24.	Baman Guwan	40		
25.	Bhojaupura	39		

Annexure - 2 (contd.)

1	2	3	4	5
26. Rampur Kathbar	35	1		4
27. Chungi	37	1 2		
28. Mawlain	36	1		
29. Khera Dang	43	1		
30. Kheri Dang	42			
31. Khiria Dang	44			
32. Rajpura	33	1		
33. Sunpura	41			
34. Batwaha	32			
35. Jijwara	34			
36. Baghora	28	1 2		4
37. Sansua	30			
38. Kangirpura	31			
39. Hazaria	26			
40. Naya Khera	27			
41. Kakrela	29			
42. Khandi	78	1 2 3 4 5 6 15		8
43. Chandrapur	82	1 6		
44. Bamori Sar	58	1 2 6 8 30		
45. Targawan	81	1 6		
46. Bandrela	85	5		
47. Karesra Kalan	77	1 2 3 4 6 8		
48. Hanota	76	6		
49. Pawa	72	1 2		4 8
50. Piprai	70	1		
51. Sarkhari	71	1		
52. Barma Bihar	73	1		
53. Shahpur	74			
54. Jharar	75	6		
55. Sunori	69	1 2 6 23		4 8
56. Burawani	63	1		
57. Churaoni	14	1 6		
58. Karenga	68	1		
59. Hingora	13	1 6 13		
60. Hansar Kalan	12	2 3 5		1 4

Annexure 2 (contd.)

1	2	3	4	5
61. Eoni		15	1	
62. Sunaura		64	1 5 8 10	4
63. Radhapur		67	1	
64. Karesra Khurd		66	1	
65. Karesra Bansi		65	1	
66. Udgawan		60	1	
67. Tindra		61	6	
68. Banguwan Khurd		62		
69. Hansari		45		
70. Rampur		46	1	4
71. Badanpura		47		
72. Pura Kalan		22	1 2 5 6 7 8 9 13 14 15 16 18 22 23 27 30	4 17 19 20 21 28 29 37
73. Hasgawan		17	1	
74. Didwara		23		
75. Bijaipura		21	1 6 13	4 8
76. Sarser		25.	1	
77. Dhamna		24	1	
78. Chadro		18	1	
79. Balar Guwan		19		
80. Chaubaro		20	1	
81. Bhuchera		16	1 2 8 9 11 12	3 4 5 6 7 10 13 14 15 16 17
82. Bijrotha		96	1 2 3 5 8 9 14 23 25 27 30	4 6 7 10 11 12 13 15 16 17
83. Myawe		98	1 2	4
84. Rara		97		
85. Rajpur		99	1	
86. Kotra		100	1	
87. Lalaun		101	1	
88. Gulenda		102		
89. Bhanwar Kali		103		
90. Daulta		95	1	

Annexure 2 (contd.)

1	2	3	4	5
91. Birdha	9	1 2 3 5 6 7 8 9 10 13 14 15 18 23 27	4 11 12 16 17	
92. Nathi Khera	11	1 6 10 13 27		
93. Pura Khurd	2	1		
94. Jhawar	3	1 6		
95. Ugarpur	4	1 6 13	4	
96. Bhaisanwara Kalan	5			
97. Bhaisanwara Khurd	6			
98. Geora Gundera	7	1	4	
99. Karo Khet	8			
100. Kandhari Kalan	1		4	
101. Kandhari Khurd	10			
102. Bhopalpura	59			
103. Talbehat (Town Area)		1 2 3 4 5 6 7 8 9 10 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 33 34	32 35 37	

Note : *Code numbers from 1 to 35 have been adopted as serial numbers of the functions/facilities listed in Annexure 1. Other code numbers used in Annexure 2 are : Mini Agro service Centre - 36; Mini Agro Service Centre with one tractor for custom hiring - 37.

The existing functions shown in this annexure are based on the information supplied by the VLWs for the current year.

The total number of reported villages in the block are 103 out of which Nagda (location code 79) is uninhabited and has not been listed.

Annexure 3

Physical Targets of the Proposed Programmes and Estimates
of Additional Employment to be Generated During the Five
Year Plan Period

Sl. No.	Sector/Scheme	Physical Target		Persons/Person Years of Employment (No.)	
		Unit	Coverage	Norms	Additional Employment
1	2	3	4	5	6
<u>1. Agriculture</u>					
1.1	Additional area under cultivation	Ha.	2572	1 per 1.5 ha.	1715
1.2	Additional area under double cropping	Ha.	3532	1 per 1.5 ha.	2355
1.3	Additional area under HYV	Ha.	4300	1 per 3 ha.	1433
1.4	Establishment of seed stores	No.	6	4 per unit	24
1.5	Establishment of Mini-Agro Service centres with one tractor each	No.	2	7 per centre	14
1.6	Establishment of Mini-Agro Service Centre	No.	1	6 per centre	6
<u>2. Horticulture</u>					
2.1	Additional area with vegetable inter-cropping	Ha.	20	1 per ha.	20
<u>3. Soil Conservation</u>					
3.1	Area to be treated	Ha.	3360	285 per 1000	958
<u>4. Minor Irrigation</u>					
4.1	Additional potential	Ha.	2350	1 per 500 for operation and maintenance	5
<u>5. Animal Husbandry (Total)</u>					<u>213</u>
5.1	Distribution of improved animals				
a)	Cows	No.	400	1 per 5 cows	80
b)	Buffaloes	No.	400	1 per 5 buff.	80
c)	Goats	No.	900	1 per 40 goats	23

Annexure 3 (contd.)

1	2	3	4	5	6
	5.2 Establishment of A.I. Sub-Centre	No.	4	3 per centre	12
	5.3 Establishment of Stock-man centres	No.	4	2 per centre	8
	5.4 Establishment of poultry farming units of 100 birds each	No.	10	1 per unit	10
6.	<u>Fisheries</u>				
	6.1 Organisation of fisher-men's cooperatives	No.	2	5 per unit	10
	6.1 Deepening and Improvement of ponds	Ha.	10	1 per 2 ha.	5
7.	<u>Cooperation</u>				
	7.1 Establishment of cold storage	No.	1	7 per unit	7
8.	<u>Industries</u>				
	8.1 Establishment of small scale units	No.	16	5 per unit	80
	8.2 Establishment of Khadi Gramodyog units	No.	13	2 per unit	26
9.	<u>Roads</u>				
	9.1 Construction and maintenance of new roads	Kms.	38	17 per km.	646
10.	<u>Electric Power</u>				
	10.1 Construction of HT/LT power lines	Kms.	50	1 per 2.76 km.	18
11.	<u>Education</u>				
	11.1 Establishment of junior basic schools	No.	2	4 per school	8
	11.2 Establishment of senior basic schools	No.	4	8 per school	32
	11.3 Establishment of higher secondary school	No.	1	16 per school	16
	11.4 Establishment of degree College	No.	1	52 per school	52

Annexure 3 (contd.)

1	2	3	4	5	6
<u>12. Medical and Health</u>					
12.1 Establishment of Maternity and Child Welfare Centres	No.	4	3 per centre	12	
12.2 Establishment of allopathic dispensaries	No.	4	4 per unit	16	
GRAND TOTAL					7671

Annexure 4

Financial Outlays for the Proposed Programmes During the
Five Year Plan

(Rs. in Lakh)

Sl. No.	Sector/Scheme	State Sector	Institu- tional Finance	Indivi- dual Contri- butions	Total
1	2	3	4	5	6
1. Agriculture					
1.1	Distribution of seeds, ferti- lizers and pesticides	12.08	24.16	-	36.24
1.2	Field demonstrations of paddy maize and wheat	0.11	-	0.22	0.33
1.3	Establishment of two mini-agro service centre with one tractor at each centre	6.45	-	-	6.45
1.4	Establishment of one mini-agro- service centre	2.58	-	-	2.58
1.5	Establishment of seed stores	4.20	-	-	4.20
	Sub-Total	25.42	24.16	0.22	49.80
2. Horticulture					
2.1	Levelling and reclamation of land	Included under soil conservation head			
2.2	Construction of wells and purchase of rahats	Included under irriga- tion head			
2.3	Purchase of lemon plants	0.0175	0.0700	-	0.0875
2.4	Purchase of fertilizers and pesticides for lemon orchards	0.0200	0.0800	-	0.1000
2.5	Purchase of implements for orchardists	0.0050	0.0200	-	0.0250
2.6	Maintenance of wells and rahats catering to the orchards	0.0500	-	-	0.0500
2.7	Purchase of inputs for inter- cropping of vegetables	-	0.0750	-	0.0750
2.8	Plant replacement and maintenance of orchards and marketing of vegetables during 5 years	-	-	0.4000	0.4000
2.9	Purchase of inputs for vegetable cropping (potato, ginger and other vegetables) on other lands	0.0100	0.0300	-	0.0400
	Sub-Total	0.1025	0.2750	0.4000	0.7775
	or	0.10	0.28	0.40	0.78

Annexure 4 (contd.)

1	2	3	4	5	6
3. Irrigation					
3.1 Wells and rahats for citrus fruit plantation project @ Rs.11,000 per village for 10 villages	1.10	-	-	-	1.10
3.2 Construction of other 490 masonry wells	11.025	22.050	11.025	44.10	
3.3 Distribution of 490 pursian wheels	2.45	4.90	2.45	9.80	
3.4 Distribution of pumping sets	3.50	7.00	3.50	14.00	
3.5 Construction of bundhies	2.25	4.50	2.25	9.00	
3.6 Desilting and cleaning of tanks	2.00	-	-	2.00	
3.7 Tractor driven well blasting-cum-custom hiring unit	1.93	-	-	1.93	
Sub-Total	24.255	38.45	19.225	81.93	
or	24.26	38.45	19.22	81.93	
4. Soil Conservation					
4.1 Reclamation of culturable waste lands	38.88	-	-	38.88	
4.2 Soil Conservation measures on lands already under cultivation	4.61	-	4.61	9.22	
Sub-Total	43.49	-	4.61	48.10	
5. Animal Husbandry					
5.1 Distribution of improved					
a) Cows	2.67	5.33	-	8.00	
b) Buffaloes	3.73	7.47	-	11.20	
5.2 Goat rearing project	1.89	1.80	-	3.69	
5.3 Establishment of poultry farming units	0.08	0.23	0.22	0.53	
5.4 Establishment of stockman centres	2.00	-	-	2.00	
5.5 Establishment of A.I. sub-centres	1.40	-	-	1.40	
5.6 Distribution of fodder seeds	0.02	-	-	0.02	
Sub-Total	11.79	14.83	0.22	26.84	

Annexure 4 (contd.)

1	2	3	4	5	6
<u>6. Fisheries</u>					
6.1 Deepening and cleaning of ponds	0.23	-	0.47	0.70	
6.2 Purchase of boats, nets etc.	0.02	-	0.04	0.06	
6.3 Stocking of fingerlings, transport of fish and marketing	0.11	-	0.21	0.32	
Sub-Total	0.36	-	0.72	1.08	
<u>7. Cooperatives</u>					
7.1 Establishment of one cold storage at Talbehat	-	-	5.00	5.00	
Sub-Total	-	-	5.00	5.00	
<u>8. Industries</u>					
8.1 Establishment of small scale industries	2.09	22.21	4.04	28.34	
Sub-Total	2.09	22.21	4.04	28.34	
<u>9. Road</u>					
9.1 Construction of kankar roads	19.00	-	-	19.00	
Sub-Total	19.00	-	-	19.00	
<u>10. Electric Power</u>					
10.1 Electrification of villages	20.00	-	-	20.00	
Sub-Total	20.00	-	-	20.00	
<u>11. Education</u>					
11.1 Establishment of junior basic schools	0.80	-	-	0.80	
11.2 Establishment of Senior basic schools	5.48	-	-	5.48	
11.3 Establishment of one degree college	18.00	-	-	18.00	
Sub-Total	28.28	-	-	28.28	

Annexure 4 (contd.)

1	2	3	4	5	6
<u>12. Medical and Health</u>					
12.1	Establishment of Maternity and Child Welfare Centres	3.20	-	-	3.20
12.2	Establishment of dispensaries	8.00	-	-	8.00
	Sub-Total	11.20	-	-	11.20
<u>13. Drinking Water</u>					
13.1	Construction of drinking water well	1.80	-	-	1.80
13.2	Revitalisation of existing drinking water wells	0.04	-	-	0.04
	Sub-Total	1.84	-	-	1.84
GRAND TOTAL		187.83	99.93	34.43	322.19

PUBLICATIONS

I Books, Project Reports and Occasional Papers :

1. TS Papola, VN Misra, HS Verma, RC Sinha and A Joshi : *Studies on Development of Uttar Pradesh*, GIDS, 1979, (Distributed by Universal Book Distributing Company, Lucknow)
2. TS Papola : *Small Scale Industries in Uttar Pradesh* (Mimeographed Report, 1978)
3. : *Spatial Diversification in Manufacturing Activity* (Mimeographed Report, 1978).
4. : *Urban Informal Sector in Developing Economy* (under publication with Vikas Publishing House Pvt. Ltd., New Delhi, 1981).
5. HS Verma : *Post-Independence Change in Rural India* (Published by Inter-India Publication, New Delhi, 1981).
6. TS Papola, RS Mathur : *Inter-Sectoral Linkages in Metal Engineering Industry in Kanpur* (Mimeographed Report, 1979). Also brought out as a *Working Paper* (WEP 2-22/WP) by ILO, Geneva, December 1979.
7. HS Verma : *Impact of Family Structure on Management of Enterprises* (Ph. D. Thesis, 1979).
8. TS Papola : *Spatial Diversification of Industries : A Study in Uttar Pradesh* (Under Publication with Allied Publishers, New Delhi).
9. TS Papola, VN Misra : *Studies in Rural Industrialisation : Issues, Data Requirements and Analysis* (Mimeographed Report, 1980).
10. TS Papola : *Production of Woolen Carpets in Kumaon and Garhwal* (Mimeographed Report, 1980)
11. : *Impact of Concessional Finance on Industrial Development of Backward Areas* (Report, 1980). Mimeographed by IDBI, Bombay.
12. MS Ashraf : *Economics of Cloth Printing in Decentralised Sector* (Mimeographed Report, 1980).
13. : *Report of the Seminar on Development of Hill Areas* (Printed Report, GIDS, 1980)
14. TS Papola : *Income Distribution, Technology and Employment : A Study of Metal Utensils in India in the Basic Needs Framework.*
15. TS Papola, RC Sinha : *Road Transport and Economic Development : A Study in Uttar Pradesh* (Institute of Developing Economics, Tokyo, 1981)
16. TS Papola : *Rural Industrialisation : Approches & Prospects* (Mimeographed, GIDS, 1981)
17. TS Papola, RT Tewari : *Impact of Concessional Finance on Industrial Development of Backward Areas : (A Study in Uttar Pradesh)*